The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1675.—Vol. XXXVII. LONDON, SATURDAY, SEPTEMBER 28, 1867. {STAMPED ....SIXPENCE {UNSTAMPED..FIVEPENCE

Original Correspondence.

THE NEW PROCESS FOR MAKING CHLORINE.

SIR,—The two very entertaining letters from Mr. Walter Weldon and Mr. Townsend Hook, which you published in last week's Journal, have afforded me great amusement and no small amount of hearty laughter. Your really inventive readers have doubtless discovered in the course of their experience that though some few good and conscientious men are here and there to be found, yet that the world abounds with greedy schemers and unscrupulous empirics, eager to pounce upon any valuable idea which may chance to be submitted to them, and convert it without hesitation to their own uses. Appropriation with these people is not only justifiable, but it is also deemed remarkably clever; the only real crime in the case is the old Spartan one of being found out; and if ever two men spluttered and floundered in the agonies of hopeless argument, and in the shifts and shuffles of an evasive defence, those men are the two steadfast allies and would-be public benefactors who have just made discovery of this extraordinary NEW process for making chlorine. The very bad spirit which pervades both their letters is a sufficient proof in itself of the intrinsic weakness of their cause, and the variety of counter statements and charges contained in their communications induces me to address my reply to them separately.

Mr. Walter Weldon commences his letter with a sudden outburst of indignation, like the roll of the drums in the opening bars of the overture to "Fra Diavolo." This is, so far, effectively conceived, and highly commendable. It wakens up the reader, and gives him to understand that something of transcendent importance demands his instant attention. But, alas! the expectation is doomed to disappointment, for the poor milk and water twaddle of disjointed abuse and Grub-street criticism which thereupon follows is a sorry recompense to the curiosity thus aroused. Mr. Weldon throughout his letter assumes the didactic and sternly impressive; and he is at much pains in a variety of ways to point out for my behoof and that of your readers his own superior knowledge as contrasted with my ignorance. Self-satisfied conceit is always a sure index to superior ability, though possibly the style in which the intimation is conveyed might bear a little softening down, for the epithets "audacious," "mendacious," and other such arbitrary and bold-beating words are so profusely scattered throughout this sweet epistle that, had I not known to the contrary, I could have believed your correspondent hailed from Debra Tabor, and was no other than black Theodore himself. But let me go a little into the detail of Mr. Weldon's defence. He says, relative to the outrageous supposition that Mr. Hook ever could have communicated my process to him—"Permit me, Sir, to declare that I did not make Mr. Hook's acquaintance till Feb. 24 last year." Is this a proof, Mr. Weldon, that Mr. Hook did not tell you on Feb. 25 last year, or at any subsequent date? He next informs me, with regard to his supposed NEW process, that a sample of restored manganese, which he exhibited at Dundee, and which was produced by the hundredweight, was reported by the professional analyst to contain 78 per cent. of binoxide. May I be permitted to ask a few questions, for we can take nothing for granted in this case?—1. What was the percentage of binoxide in the original ore before its subjection to the NEW process?—2. Where are the proofs that the specimen exhibited at Dundee was a pure and unsophisticated sample of the identical hundredweight said to have been thus recovered elsewhere?—3. Who was the professional analyst in the case?—4. Was the Inspector of Weights and Measures present on the occasion? Regarding another matter, Mr. Weldon does not say that he does not use a leaden still himself, but he kindly informs me that stills of silicious stone are also frequently used for a like purpose. I thank him for this exceedingly novel piece of information, and, in return, should I ever meet him I will show him an omnibus. He next proceeds to inform me that I do not understand what his process is. In this he is perfectly correct. I do *not* understand what his process is, and I do not believe he understands himself. I know what *my* process is, which he is now imitating and, with the greatest effrontery, is publishing as a new discovery of his own. This said discovery, or process—call it what you will—is defined by Mr. Hook, in his letter of Saturday last, to consist in the regeneration of the oxide of manganese, which is *all*, he continues, that Mr. Weldon's process is concerned with. These are his very words, and the originality of this ALL will be found fully and finally disposed of by the letter and testimonial which follow this, my present communication.

It becomes me now to say a few words more relative to the meeting between Mr. Hook, Mr. Weldon, and myself, in 1866, where in direct opposition to the caution given to Mr. Hook, that I would have no chemical friend of his present, Mr. Weldon, a perfect stranger, thought fit to honour me with a visit, and listen, and watch, and make occasional enquiries, while his estimable partner was conducting the examination in chief. The general capabilities, and not the secret of manufacture, of a certain invention of mine were then briefly entered upon. The object of that invention was not what Mr. Weldon states in his letter, but was to render the generation of chlorine *continuous*, an object which was referred to again and again, and which since that meeting Mr. Weldon has carried out in so clumsy a manner.

Now, to prove that this really was the object of my communication, I will refer to a gentleman very well known in the paper-making world—Mr. Routledge, of the Eynsham Mills, Oxford, and of Newcastle-upon-Tyne, whom I had seen before on this very subject, but who was at the time too busily engaged to move in the matter. It was with regard to this particular machine that Mr. Hook was told he would, if he had anything to do with the business, be required to pay 10*l*. The 10*l*. were not, as Mr. Weldon says—taking I suppose a leaf out of his own book, and wishing at the same time to damage me if possible—to be handed over to me for my benefit, and he well knows this to be true. Neither was this the question that was not answered satisfactorily on the occasion of that interview. The questions which were not answered satisfactorily were those relating to the truth of his partnership with Mr. Hook, and the business that brought him as an intruder and listener to that meeting. I can only say it would be a good job if his own demands in carrying out his *supposed* new process had been equally moderate.

Mr. Weldon talks of dealing with me in a court of law. May I ask what court of law, and for what purpose I am to appear there? Is it before Mr. Bodkin in Petty Sessions, to astonish that gentleman by asking him to allow me a little further time to enable me to pay my taxes, or is it in one of the higher courts that I am to appear to answer the charge of manufacturing SPIRITS without a licence? I did not explicitly state in my last, but I do state now, and most emphatically, that I have gone very much further in the economical production of chlorine than ever has been yet accomplished, even by the supposed new process, and Mr. Weldon will shortly hear more of this in a tangible form, and of its production in far larger quanties than he has ever conceived. But I say no more of this at present. Relative to the parting suggestion of this *honest* and *successful* inventor, as he modestly terms himself, concerning "curses and chickens," and roosting, the idea is rather overstrained, and better applicable to himself than to me. If Mr. Weldon wants to go to roost by all means let him go; his curses will do me no more harm than his blessings; and as for his chickens, he had better not count them before they are hatched.

Now, Mr. Hook, I will have a few words with you. You have the reputation of being a sharp man of business, but I never heard that your ideas soared much higher than the "straw loft," or that you were likely to suffer from enlargement of the heart. You say that the insinuation contained in my letter, that you communicated any chemical knowledge which had been "confidently" imparted by me to you is simply and *entirely* false. In this sentence there is a clear admission of the fact that I *did* confidentially impart to you certain chemical knowledge, and from the context of your letter, it is at once obvious that the whole character of our communications have related to the manufacture of CHLORINE. That there is a falsehood in the case, and a very gross one, is clear, and a very few words will show whether it lies with me or with you. In what follows in your letter you contradict yourself, even in the short space of a single sentence; for speaking of my experiments at Woburn, you first say "they are worthless," and then in the very same breath you speak of them as merely incomplete. You next have the audacity—borrowing an Abyssinian epithet from your friend and partner—you have the audacity to tell me that I was *dismissed* from Woburn. Brush up your memory, Sir, and speak the truth, or if veracity sticks in your throat from ill acquaintance, let *me* speak, and show how plain a tale shall set you down. The experiments which I undertook to perform at Woburn I did perform. They were not worthless; but were so entirely successful, as far as they went, that from you—you yourself Mr. Townsend Hook—I immediately received a definite proposition to proceed further, and that proposition was conveyed to me by Mr. William Thomas, whose name you have thought fit to import into this controversy, and who saw you at Snodland, and also a mutual friend of yours in the "Loose Valley," upon this very business. Now, the proposition so conveyed to me was this—that in order to test the affair upon a larger scale a furnace was to be built at Woburn, and other arrangements made, and set to work; and if all turned out satisfactorily, then that a sum for which I had stipulated as the price of my services (300*l*.) was to be paid to me by Mr. Hook. This was the proposal to me, and these conditions I was perfectly agreeable to comply with. But the moment I mentioned a written memorandum to that effect, I was told that Mr. Hook would not sign it. He would not put his hand to anything. I must depend upon his word—his word of mouth, in fact—his verbal assurance as to the payment of the 300*l*. I should, of course, be quite safe as to receiving the money as soon as ever the work was done. It was not very likely Mr. Hook would go from his word. If I did not accept these terms the whole affair would come to the ground—that was quite understood. I at once determined not to accept any such security, and I think any other sane man would have done the same; and though the work would have been instantly commenced had I but spoken one word; yet I consistently turned a deaf ear to all persuasion, and so the connection at once ended.

Now, Mr. Hook, deny this statement if you can—I DISMISSED MYSELF, and the reader must now determine whether the falsehood lies with me or with you. Before quitting the subject, I may as well say that you certainly did join in the expenses at Woburn, such as they were. You paid, as far as *my knowledge extends*, a total amount of 15*l*. by cheque, and it very nearly broke your heart; for, meeting a friend of yours the day after that fearful venture, you told him you had not had a single wink of sleep all night, you were so fearful of ultimately losing the money. Your friend was my authority. So much for enterprise. If your money were as easily lost as your temper it would be a bad case indeed. You should really try to preserve this latter in better keeping, then you would not fall into all this hot water.

Your partner, too, Mr. Weldon, is very irritable, and is evidently exceedingly sore about my having invented the regeneration of manganese before him. It is very absurd: but I cannot help it. I suppose, when my new patent comes out, which will be very shortly, I must let you and your "mutual friends" have a licence on easy terms, just to make some amends for your present disappointment.—*Sept. 24.* ISHAM BAGGS.

The following letter and testimonial, which have been addressed to me, and which I now submit to the intelligence of your readers and the public generally, carry with them their own argument, and need no further remark from me:—

"*Paper Mills, Ilford, Sept. 24.*—In reply to your letter I have carefully read your article in the *Mining Journal* of Sept. 14, on the new process for making chlorine, and I feel great pleasure in stating that I can bear witness to all the facts brought forward by you in reference to the *supposed* new process. I do hereby testify that at these very mills, which have been many years under my control, you have made great quantities of chlorine and bleach by the methods specified in your paper of the 14th inst.; that you have used at different periods many tons of lime and other materials, and that you always employed the oxide of manganese so restored by you for making fresh chlorine. I am further aware that the same system was acted upon by you to a great extent at "The Tovil Upper Mills," Maidstone; and I am more than surprised to find that anyone, appearing to devote attention to such matters, could think of bringing forward as a NEW process what is already so well known. Several of my workmen gladly forward their corroborative evidence to the same effect. Their united testimony I have annexed.—THOMAS FARRANDS."

TESTIMONIAL.—We the undersigned hereby declare and bear witness that the statements contained in the letter of Mr. Isham Baggs, as published in the *Mining Journal* of Sept. 14, are TRUE and CORRECT, relative to the manufacture of chlorine and bleach, and the continuous regeneration by him of the manganese, as precipitated by means of lime.

A. GARDNER, Engineer. | W. H. JINKINS, Boiler and Bleacher.
JAMES TYAS, Engineer. | J. BARNES, Engineer.
GEORGE CHURCH, Engineer. | THOS. CHURCH, Boiler and Bleacher.
All of the Ilford Paper Mills.

If this is not sufficient evidence to establish my claim to priority in this invention, I can readily obtain from the Tovil Upper Mills another batch of names, whenever I am called upon.—ISHAM BAGGS.

NEW PROCESS FOR THE MANUFACTURE OF CHLORINE.

THE PRETENSIONS OF MR. ISHAM BAGGS.

SIR,—Since writing to you last week I have visited the Soho Mills, Woburn, with a view to obtaining the testimony of Mr. Wm. Thomas as to the nature of the allegations made by Mr. Isham Baggs. Unfortunately, Mr. Wm. Thomas, at the time of my visit, was away from home, but I saw his sons, and those gentlemen not only informed me of the nature and object of the experiments made by Mr. Baggs at the Soho Mills, but also showed me all that remain of his own notes of those experiments,—notes evincing, by the way, the most remarkable ignorance alike of chemical facts and of the recognised methods of constructing chemical formulæ. As Mr. Wm. Thomas, on his return, will probably send you full particulars of what Mr. Baggs attempted to do at the Soho Mills, all I will say now on that point is that his experiments there had no bearing whatever upon the process patented by me, and that their main reference was simply to bleaching by means of *chlorine-water* instead of by means of solution of *chloride of lime*. There has not yet been time to complete the rigid enquiry into this matter which I have set on foot; but, so far as has been at present ascertained, the case seems to have been precisely the same with Mr. Baggs's experiments at all the other places to which he refers. Upon this point, in due time, other testimony than mine will be forthcoming.

In my former letter to you I expressed the opinion that the charges with which Mr. Baggs had so unjustly assailed me would surely be found to recoil upon himself. So far as my enquiries respecting Mr. Baggs and his projects have yet gone, I have learnt of his having put forward, at various times, as novelties, devised by himself, just four ideas, namely:—1. The method of making bleaching powder, to which I referred last week.—2. The employment, as above mentioned, of chlorine-water instead of solution of chloride of lime, or of other similar chloride.—3. Certain alleged "Improvements in the Manufacture of Inflammable Gases," which he patented in 1865. And, lastly, the process for treating hydrochloric acid which is the subject of the letter from him published in last week's Journal. Now, not one of these ideas has the slighest claim to be considered original. Mr. Baggs's method of making bleaching-powder, as I stated in my former letter, so far from having been invented by Mr. Baggs, was one of the very first methods ever employed, and, though it still lingers in use here and there, has now for many years been all but universally abandoned in favour of the system of making bleaching-powder in "chambers." Then, as regards bleaching by means of chlorine-water, that was literally the very first method of bleaching by chlorine ever practised, and was in use many years before Mr. Baggs was born. Berthollet, in 1785, discovered that "an aqueous solution of chlorine had the power of destroying vegetable colours," and he "showed the process to Watt, at Paris, in 1786, and Watt, on his return to Scotland, tried the plan on 1500 yards of linen in the bleach-fields of his father-in-law near Glasgow. It was brought under the notice of the bleachers of Aberdeen by Prof. Copeland, and was introduced at Manchester about the same time by Dr. Henry. It was soon found, however, that the texture of the goods was injured by the chlorine, and that the workmen were much affected by the gas;"* and for these reasons bleaching by chlorine-water was abandoned immediately upon the bleaching properties of solutions of the chlorides of the alkalies, and of the alkaline earth, lime, being discovered. This was some time previous to 1799, in which year Tennant took out his patent for dry chloride of lime or "bleaching-powder:" but for the invention of which compound bleaching by the agency of chlorine could not possibly have been so universally practised as it has been ever since. What Mr. Baggs has proposed with respect to this point is thus simply to go back to the imperfect methods practised in the very earlist infancy of the art of bleaching by chlorine. Coming next to his patent relating to "inflammable gases," I will do no more than quote, with respect to it, the verdict of the only scientific journal in which I have seen it referred to, and which simply said of it "*this is another case of patenting well-known chemical processes*," but with respect to his patent for treating hydrochloric acid, I must beg you to grant me space for longer quotations. Permit me to place here, side by side, an extract from Mr. Baggs's specification of that patent, and an extract from a specification of Mr. Edward Sonstadt's, of more than four years earlier date:—

MR. BAGGS'S SPECIFICATION, DATED JUNE 13, 1867.

My said invention consists in certain improved processes whereby the water combined with the crude hydrochloric and nitric acids of commerce, or a portion thereof, together with various impurites which commonly exist therein, are separated from the acid by pouring thereon, or bringing in contact therewith, cold or hot sulphuric acid, with or without the aid of supplementary heat. The separation thus effected may be conveniently conducted in a series of Wooliff's bottles made of earthenware, stoneware, glass, or other suitable material. The acid or gas to be treated in accordance with my said invention is placed in the first vessel, and water in the second, or second and third; sulphuric acid is then poured into the first vessel, with or without the assistance of heat; and as the acid passes over it is absorbed by the water in the second vessel, until the water is saturated, any escape of acid being taken up by the water in the third vessel. When the water in the respective vessels is saturated it is drawn off, and the sulphuric acid, the heat-giving and evaporative power of which is thus for the time exhausted, is then also drawn off and again concentrated by the application of heat, as well known, by which means it may be used over and over again for the same purpose as often as desired.

MR. SONSTADT'S SPECIFICATION, DATED MAY 8, 1863.

I prepare anhydrous chloride of magnesium by slowly heating the hydrated chloride to redness in a current of dry hydrochloric acid. I use, by preference, a platinum crucible, into the cover of which two tubes are fitted, one for the ingress and the other for the egress of the stream of hydrochloric acid gas. I find the following to be a convenient arrangement:—A flask or other suitable vessel containing strong sulphuric acid has an acid tube passing through its closely-fitting cork or stopper; the lower end of the tube enters the sulphuric acid. A tube connects this flask with another vessel containing sulphuric acid for drying the hydrochloric acid gas. This vessel is provided with a safety tube, and with a tube which connects this vessel with the ingress tube of the platinum crucible. *The arrangement for the extrication and drying is precisely that in constant use in laboratories.* All being prepared, the crucible being charged with chloride of magnesium, previously dried at a temperature not exceeding 130° centigrade, heat from a gas flame or otherwise is caused to play upon the crucible, and pure hydrochloric acid is slowly poured through the acid tube into the flask containing sulphuric acid. Hydrochloric acid gas is rapidly extricated, and passing over the heated chloride of magnesium contained in the crucible carries off the moisture, and escapes through the exit tube. The hydrochloric acid gas passing out of the crucible by the egress tube may readily be condensed by the attachment of a tube connecting the egress tube of the crucible with a little water. After condensation the hydrochloric acid may, of course, be used over again, as may also the sulphuric acid, if it be first concentrated by the evaporation of the water which it has imbibed during the process.

The passage here quoted from Mr. Sonstadt's specification is only one of countless proofs that could be adduced to show the utter lack of novelty on the part of Mr. Baggs's hydrochloric acid process; but this one is sufficiently conclusive. It shows Mr. Sonstadt describing the de-hydration of hydrated chloride of magnesium by means of pure dry hydrochloric acid, *obtained from commercial acid by precisely the same process as that patented, four years afterwards, by Mr. Baggs.* Mr. Sonstadt, however, is very careful not to claim this method of treating hydrochloric acid as having been invented by him. Four years later, Mr. Baggs does not hesitate to claim it as *his* "invention;" but Mr. Sonstadt expressly mentions it as being—as everyone possessing the least acquaintance with the subject must well know that it is, and has been, time out of mind—"*in common use in laboratories.*" We thus see that Mr. Baggs, in accusing me of piracy, has simply, to use a homely simile, been measuring my corn out of his own bushel, and that his assertion that he invented my process for the perpetual regeneration of the oxide of manganese employed in the manufacture of chlorine constituted by no means the first instance of his putting forth pretensions to that to which he had no shadow of just claim.

Mr. Baggs's last letter to you, devoted to that method of treating hydrochloric acid which I have just shown that he did *not* invent, affords another similar sample of his quality. In this last letter he affects to be as well acquainted with respect to all concerning the present production and consumption of hydrochloric acid as in his previous letter he had professed to be with respect to my process for the perpetual regeneration of oxide of manganese from chlorine residues. He really knew scarcely anything whatever respecting the latter, and he is but little better informed with respect to the former. Take, for instance, his absurd statement that 2500 tons of commercial hydrochloric acid per week are worth 649,000*l*. per annum. Our alkali-makers would, indeed, rejoice to learn that they were! Big manufacturers and little ones, the 649,000*l*. would be 7000*l*. or 8000*l*. a-year each for them, all round. But the statement is preposterous. Mr. Baggs bases it—firstly, on the alleged fact that the market price of commercial hydrochloric acid is 5*l*. per ton; and, secondly, on the implied assumption that, over and above the quantity at present sold at that price, 2500 tons per week more could be sold at it, if that quantity were forthcoming. The market price of commercial hydrochloric acid, however, is *not* 5*l*. per ton, except in London and certain southern districts of England; on the Tyne, even during the prevalence of the exceptionally high prices of last year, the market price was only 3*l*. per ton, and in Lancashire, where by far the greatest quantity is sold, it was considerably less; and so far from the demand for hydrochloric acid at 5*l*. per ton being only incompletely supplied, it is quite certain that if manufacturers could sell any considerable part of their acid at (say) only 30*s*. per ton, they would much rather so sell it than employ it for the production of bleaching-powder, high as has latterly been the selling price of that commodity. A ton of bleaching-powder will now fetch about 13*l*. 10*s*. per ton, but it costs from 4*l*. 10*s*. to 7*l*. for oxide of manganese, and over 2*l*. for labour, lime, casks, repairs, and general charges, while at the same time it requires for its production from 5 to 8 or 9 tons of commercial acid, according to the quality of the manganese employed. The acid used in the manufacture of bleaching-powder thus cannot be estimated as worth to the manufacturer even 1*l*. a ton, and we may, therefore, be quite sure that he would gladly diminish his production of bleaching-powder in order to supply the demand for any acid for which he could get any such price as I have named. Nor is it true, as Mr. Baggs alleges, that there is now produced any "gigantic surplus" of hydrochloric acid which is not turned to practical account. There *used* to be such a surplus, but very great changes, of which Mr. Baggs is evidently ignorant, have taken place within the last few years. The production of bleaching-powder has more than *doubled* within the last four years, and there are three applications of hydrochloric acid which Mr. Baggs omits from his catalogue of its uses, and of which he is evidently unaware, which consume immensely more of it than all its other applications, excepting to the manufacture of bleaching-powder, put together. According to the last report of the Government Inspector under the Alkali Act, our manufacturers last year condensed 99·27 per cent., or within 0·73 per cent. of the whole, of the acid they produced, and the great majority of the manufacturers certainly either used or sold every ounce of the acid they condensed, notwithstanding that the total quantity of aqueous acid obtained must have been very close upon 500,000 tons. Many manufacturers have now a larger demand for bleaching-powder and other chlorine products than they make acid enough to enable them to supply, and hence their interest in my artificial oxide of manganese, due to its property of liberating a greater quantity of chlorine from a given quantity of acid than a native oxide will. There are many manufacturers, moreover, who would use Mond's and other processes for the recovery of sulphur from tank-waste, but for their having no acid available for the purpose; and although there are still a few manufacturers who, owing to various exceptional circumstances, throw away unused more or less of their hydrochloric acid, they are a very small and a rapidly diminishing minority. Nearly all the other statements in Mr. Baggs's last letter are as wide of the truth as those I have thus examined, Mr. Baggs's pretensions to accurate knowledge respecting any matter relating to the group of allied industries to which that of chlorine belongs being evidently as unfounded as his pretensions to having invented my process for the regeneration of oxide of manganese, or to his having originated those ideas, set forth above, upon which, from time to time, he has led various manufacturers to spend money, but which, as I have clearly shown, were in use years before he had as yet come into the world.

Very pertinently did one of your contemporaries lately remark that "there never was a work of note, without a contest for whatever merit might possibly attach to its authorship. Nor are the claimants always scrupulous as to the means they take to attach their names to the coveted distinction. Whenever there is a chance of stealing a laurel, no matter how insignificant or how sere, there will always be found men mean enough to perpetrate the theft, even though there be no possibility of wearing the miserable trophy undetected beyond the passing moment." Of such, Sir, is Mr. Isham Baggs. WALTER WELDON.

Park Villa, West Hill, Highgate.

* Watts and Richardson's "Chemical Technology," Vol. I., Part III.

THE OAKS COLLIERY DIFFICULTY.

SIR,—I am fully alive to all the perplexing thoughts and painful apprehensions which must have presented themselves to the engineers who have held consultations as to the best means to be adopted for recovering the bodies of the unfortunate men entombed in the Oaks Colliery. No one can complain of what has so far been done in the matter by way of obtaining the human remains of the victims to the first explosion. Every one, indeed, must lament the sacrifice of life made in the attempt to bring to surface for Christian burial the poor fellows who met with death by such a sad catastrophe. In the whole annals of coal mine accidents none are so deplorable as this Oaks Colliery one; and far be it from me to in any way impugn the engineering talent and experience which up to the present time has been employed in connection with the colliery since the occurrence of the multiplied calamities.

I have never been at the colliery, and I am not informed as to the distance from the downcast to the upcast shaft, nor am I aware of the facilities or difficulties in the way of obtaining a direct current of air from one to the other. Before opening the mine out, however, it occured to me that the best means to be adopted for securing and carrying forward an efficient ventilating current of air was that of fixing an exhaustive machine at the top of the downcast, and connecting with it and carrying down the shaft and forward in the workings light malleable iron tubes, of about 2 ft. in diameter. Such a means, in combination with the use of Stephenson's safety-lamps, would have been more expeditious and satisfactory than the diving apparatus now in use, and with which men have to grope in the dark.

I hope that a powerful exhaustive ventilating machine is being placed at the top of the upcast preparatory to opening the two pits. The second pit should not, however, be opened till by some means the engineers are satisfied that the fire is effectually extinguished.

Corn-street, Bristol. MARK FRYAR, M.E.

REPORT FROM SELECT COMMITTEE ON MINES—No. II.

SIR,—A few weeks ago I presumed to address you on this subject, and I then referred particularly to the necessity there is for an addition to the present number of Inspectors. There are a variety of notions on this head, but, in my humble opinion, the recommendation of the Committee relating to it is a correct and proper one. The resolution 10, however, referring to the prohibition of more than 100 men being employed in any mine at the same time, unless such mine is divided up in separate districts, &c., requires, I think, some greater qualification than is given to it by the Committee. One can easily see the drift or purpose of such a recommendation. In fiery collieries it is imperatively necessary, as a measure of safety, that the pannel system of working the coal be adopted in its entirety and maximum efficiency. One reason for this is that in a current of air circulating through working places and along working faces for great distances large quantities of explosive gas become mixed with such air before it has completed its circuit, and it is thus rendered not only unfit for respiration but highly dangerous as an explosive mixture. Under these circumstances, should an explosion take place the fearful blast spreads itself with fatal effect over the entire subterranean galleries of the mine, and poor chance is there for the escape of a single soul.

It may also be averred that in mines making no fire-damp a continuous unbroken current of air is objectionable, as after this air has travelled through a portion of the mine workings it becomes in hygroscopic condition, and, in vitiation by carbonic acid gas, totally unfit for the support of animal life. Splits of this air may, however, be effected without resorting to the legitimate pannel system of working, and the evil we have just referred to thereby obviated. In the thin seams of coal in several British coal fields the longwall system is unquestionably the cheapest and safest that can possibly be adopted, and in many cases no carburetted hydrogen gas is ever met with, nor is any known to have been met with, in the working of entire districts of collieries. The reason for this undoubtedly existing in some geological conditions of the coal beds themselves, and of their superincumbent strata, favouring the escape of such gas as is eliminated from the coal during its decomposition. In such collieries the resolution No. 10 of the Select Committee is unnecessary and inexpedient. We must, however, admit and maintain that in the working of all coal beds making large quantities of fire-damp the adoption of the separate district system of working should be made imperative, and I am of opinion that the permission of a hundred men in each district is not all that can be desired in this direction. In such coal seams as the Barnsley thick seam from 40 to 50 men in each pannel is most assuredly sufficient, and in any case the amount of air passing through the working places of each such pannel should be sufficient to keep the working places free from fire-damp, not only under ordinary circumstances, but there should be such a surplus of ventilation as would be likely to cope successfully with an extraordinary make of gas. We mean such an elimination of gas from the pores and faces of the coal as is likely to follow a sudden fall of the barometer.

It is difficult to conceive how the pannel system of working can be carried out with the imperatively necessary economy for making a colliery remunerative without using air crossings, and having districts divided by made "intakes" and "returns." Should then an extensive and violent explosion take place there would always be danger of such air crossings being rendered useless for the purpose of ventilation, and there will, moreover, always be a liability of the explosion extending itself into other districts, or the after-damp filling up the access to these districts, and thus rendering the precautionary measures involved in this system of working totally ineffective and inutile. Where, however, such measures for safety are adopted there will always be a probability of their proving efficient, and I would for one most cheerfully and heartily endorse the spirit and purpose of the resolution referred to, only with the proviso that it be enforced in fiery districts, and not in mines where no fire-damp is ever met with.

In the proposed alterations in the general rules is to be observed a commendable intention and meaning, but we very much question whether or not any improvement in so regulating mines as to prevent accidents will thereby be effected. It appears to me that the efficient working of the Mines Inspection Acts of Parliament rests in a great measure with the discretion, judicious management, and practical ability of the Government Inspectors. Of course, great care must be exercised in the wording of any legislative enactment, as when Acts of Parliament are placed in the hands of a stipendiary magistrate the law as it stands and in its literal rendering, irrespective of misapplication apparent to the uninitiated and practically acquainted, will be administered. A case illustrative of this is just reported from South Staffordshire. An Inspector happens to find out that some old pits in an out-of-the-way district have been left unprotected; immediately on this discovery he obtains a summons against the pro-

prietor of the pits for a breach of general coal mining rules, without having first pointed out to the proprietor wherein he was transgressing. According to the wording of the rule, and rendering of the same by the magistrate, this coal mine owner was, no doubt, liable for the fine imposed upon him, but we are greatly mistaken if, in the sense of *vox populi*, it was not the duty of the Inspector to have first satisfied himself that the coal owner was determinedly and persistently setting law at defiance.

It will be but little to my present purpose to refer *seriatim* to all the alterations in the general rules which the Committee has proposed; suffice it to say that in every case the wording only, and not the sense or spirit of the rules, is proposed to be altered, and if such alterations give a more definite and settled meaning to the law, so as to leave less room for quibbling distinctions and discussions, they deserve to be carried out by the Legislature.

Sept. 25. ——— JAMES GREGORY, M.E.

ADAPTABILITY OF HAUPT'S DRILL TO MINING PURPOSES.

SIR,—In reply to the enquiry of "A Looker-On," in last week's Journal, I desire to state that Gen. Haupt's Drilling Engine is well adapted to the sinking of shafts. By reason of the peculiar telescopic arrangement of the columnar frame, it may be placed horizontally, flat, sidewise, or at any angle, and fastened to the sides of the shaft. The drill, or drills, may be placed at any point upon the frame. The compresser would be small at best, and can be made in convenient form, to occupy space chiefly vertically. The receiver can also be adapted in shape, but, in the most ordinary form, may be placed in recesses in the wall at convenient distances, or in the level first above the place of working; or it may be supported upon a high stand, made of wood or iron, which shall derive its support from the bottom by two or more legs arranged close to the sides of the shaft, and out of the way in working, or it may be suspended at a convenient point. All the pipe used is flexible hose, and the connections are instantly made by slipping one inside the other, to be held by a spring. It will be understood that, beside the convenience of having all the apparatus near the working, is the further advantage of saving power by transmitting the air only the shortest convenient distance. When a blast is to take place the pipe is uncoupled, and the apparatus raised by a rope to the top, or to the first level above. As the drill frame weighs only about 250 lbs., and each of the drills only about 125 lbs. additional, there would be no difficulty in handling the machinery as is proposed. Having replied to the enquiry, and believing that my letter in the Journal of Sept. 7 answers all other suggestions of difficulty, I will not ask for further space. Preparations are making to practically work the drill in several localities, where its proper merits will be established. ——— J. A. M.

THE DARIEN CANAL.

SIR,—In a paper recently published in the Journal of the Royal Dublin Society, I have described at considerable length the topography of the line of the proposed canal across the Isthmus of Darien, which is now acknowledged to be the only one by which a communication can be opened, capable of admitting the passage of ships from the Atlantic to the Pacific, and *vice versa*. As the subject is one of commercial importance, I beg you will afford space for a brief summary of the principal points of interest which the line presents. The harbours—Caledonia Harbour, the Channel of Sassardi, and Port Escoces on the Atlantic, and the Gulf of San Miguel and the Estuary of the Tuyra on the Pacific—are deep, capacious, and secure, and admirably adapted for the termini of a grand interoceanic navigation. From Caledonia Harbour the line first crosses a plain to the entrance of a valley, which runs in an oblique direction between Sassardi Mountain on the north-west, and Agla Mountain on the south-east. It then traverses the valley to the Sucubti River. The course of the Sucubti is next followed down to its mouth, which opens into the Chuquanaqua, a tributary of the Tuyra. Lastly, crossing the Chuquanaqua, the line traverses the forest to the junction of the Lara with the Savana. From that point there is an uninterrupted navigation for the largest ships down to the confluence of the Savana with the estuary of the Tuyra, which, after a course of three miles, discharges itself into the Gulf of San Miguel. The whole length of the line is 39 English miles, of which 21¼ miles are along the course of the Sucubti. As the lower 12 miles of that river are pretty direct, they would admit of being canalised for a moderate outlay. The entire line of transit from sea to sea will then consist of—canal, 27; canalised river, 12; navigation of the Savana, 16; and of the Tuyra, 3: in all, 58 English miles.

According to the estimate drawn up by the commission of engineers of the Corps des Ponts et Chaussées, to whom the Emperor Napoleon referred the examination of the question in 1857, the cost of the canal would be about 4,500,000*l.* sterling. The estimate of M. Moguel Bey, the chief of the corps, drawn up in 1864, amounted to about the same sum. As to the traffic that will pass through, it is sufficient to state that, from the Board of Trade Returns, published in 1866, it appears that, if the canal had been opened in 1864, 8929 vessels, with an aggregate tonnage of 5,088,165 tons, would have availed themselves of the passage in that year; and even that large total does not include the trade of British Columbia, Guatemala, San Salvador, the Philippine Islands, and some other places from which there were no returns: nor the immense trade of China, which I have omitted, because the statistics do not show how many of the 16,684 British, European, and United States vessels, with an aggregate tonnage of 6,458,515 tons, which entered and cleared from ports in China in 1864, sailed from and to ports on the Atlantic. The value of the cargoes that would pass through would amount annually to nearly 150,000,000*l.* sterling. The immediate desideratum is a detailed survey of the line, the entire length being only 39 miles; this may be accomplished by an engineer, with two assistants, in three months. Their salaries and maintenance for that period will constitute the whole expense, as the French Government promised me long ago the assistance of a vessel of war from Martinique, and of an engineer of the Corps des Ponts et Chaussées; and I have no doubt that the British Government will fulfil the promise made to me by the late Lord Palmerston, that whenever I should be prepared to survey the line he would order a ship and an officer of the Royal Engineers to accompany me from Port Royal, Jamaica.

Any association that will undertake to make the survey will be largely remunerated by the concession of the valuable tract which the canal will traverse, which will be granted to them by the Government of New Granada upon their forwarding a copy of the survey to Bogota. The concessionaires will then be in a position to form a company for cutting the canal, and may transfer their property to it for paid-up shares, or a percentage of the profits of the undertaking.

North Cumberland-street, Dublin, Sept. 23. E. CULLEN, M.D.

EMIGRATION TO THE GOLD REGIONS.

SIR,—If it be correct, as stated in some of the journals, that seven banks, including the Banks of France and England, have two hundred millions sterling in their coffers, chiefly unemployed balances, what amount must there be, including the remainder of the banks, in each country—say, two hundred of the largest banks throughout Europe? Gold still flowing in from various parts of the world, the production of gold in Australia, California, and many other new countries is only in its infancy, as mining was in this country three or centuries ago. The distress in the mining districts in Cornwall during the last two years has caused thousands of the most experienced working miners of the present generation to emigrate, chiefly to gold-producing countries, from the fact that scores, if not some hundreds, of their neighbours have realised fortunes by working in gold mines, until the surface was well nigh exhausted of its treasure, just as streaming the surface was carried on in Cornwall for tin during many centuries. They now turn their attention to quartz veins; the more they are explored in depth the more productive these veins or lodes prove to be, so that the quantity of gold must and will considerably increase in future. The first people who went to the diggings were men principally unacquainted with mining operations, but, recently, thousands of the most skilled and able miners have gone to the gold countries in consequence of the great depression so suddenly falling upon the mining industry of this country. The few persons who have returned to their native country after a few years' absence have purchased estates, and others pride themselves in purchasing property and building themselves houses. This circumstance has also been a great inducement to the best class of miners to try their fortunes in the working of gold mines, consequently this emigration is still at its height. The object is principally in future to work the quartz, veins, or lodes for gold; and as the veins are found in Australia as well as in California to be lasting the more they are explored, and men can get better wages, with the chance of becoming proprietors of gold mines abroad, instead of being working men at home, this pursuit will naturally increase, and the production of gold must of necessity increase in proportion. Other countries not in so forward a state as Australia and California, doubtless, will be found to contain gold as well. We are so short-sighted in general, that because rich lodes were not previously discovered, there were no such deposits to be found. The same remarks apply to every place whenever a rich mine is discovered in Cornwall or in Devon; the people immediately say how strange it is that this mine was not discovered before, so many experienced miners having gone over this very ground so repeatedly? The answer must be that every man has not got the eyes of Argus, and that every man is not gifted with the talent of discovering mines. Chance in the pursuit of mining has done much in the way of discovery, and always will; but some men appear to be gifted with the talent of discovering metallic veins or lodes more than others. We may yet hear of some very rich mines being discovered in this country, and in places thought but little of at present.

Sept. 23. ——— ADVENTURER IN MINES.

THE MADOC GOLD FIELDS.

SIR,—I enclose a report of the result of some analyses lately made by Dr. Otway at the Madoc Gold Fields. I have every reason to believe them to be perfectly *bona fide*. There is no doubt but that it is a gold *mining* country; gold *digging* is another question. I do not think as yet any good diggings have been discovered. The rise of the granite peaks seems to have been been arrested at about the present level of the water-courses; consequently, the overlying crust is greatly broken up, and the slates, &c., dip in all directions; still, as a general rule, granite has been found to be the rock from which all the slates, &c., dip, and, nothwithstanding what we hear of the peculiarities of the Laurentian formation, I suspect most of them will be found to depend upon the unusually low elevation at which the uprise of the granite has been arrested.

Important discoveries of silver ores (the chloride among them) have been made at Current River, near Fort William, Lake Superior; the lode is said to have been traced for miles. GEORGE C. MAHON.

Detroit, Sept. 9.

[Report ending Aug. 2, 1867, from the office of Longhead, Hurd, and Co., of assays made by Dr. OTWAY, M.D., F.R.S.]

No. 1.—Cariboo Mine, Lot No. 29, in the 4th Concession Madoc; yield per ton—gold, 16 ozs. 13 dwts. 8 grs.; value, $333.

No. 2.—Lot No. 19, in the 5th Concession Tudor; yield per ton, 4 ozs. 3 dwts.; value per ton, $84.

No. 3.—Lot No. 17, in the 10th Concession Marmora; yield per ton—gold, 8 ozs. 6 dwts. 6 grs.; value per ton, $133·12.

No. 4.—Bay State Mine, Lot 12, in the 8th Concession Madoc; yield per ton—gold, 25 ozs.; value per ton, $500; silver, $30=$530.

No. 5.—Madoc Gold Mining Company's Tract, Lot No. 17, in the 7th Concession Madoc; yield per ton—gold, 16 ozs. 13 dwts. 8 grs.; value per ton, $333·33; silver, $80=$413·33.

No. 6.—Lot 17, Concession A, township of Galway, argentiferous galena; yield per ton—sulphur, 33 per cent.; silver-lead, 67 per cent. Silver, 16 ozs. 13 dwts. 8 grs.; value per ton, $35; lead—value per ton, $66·66; sulphur, $10: total value per ton, $111·66.

No. 7.—Lot No. 20, in the 4th Concession Kildare; yield per ton—gold, 4 ozs. 8 grs.; value, $83·33; with a trace of silver.

No. 8.—Lot No. 3, in the 2d Concession Tudor, argentiferous galena; yield per ton—silver, 16 ozs. 3 dwts. 8 grs.; value per ton, $34·50; yield of lead per ton, 18 per cent.

No. 9.—Cameron Gold Mining Company, Lot 18, in the 8th Concession Madoc; yield per ton—gold, 2 ozs. 1 dwt. 6 grs.; value per ton, $41·66.

Dr. Otway has located shafts upon the following lots:—

Lot 19, 8th Concession Madoc, W. G. Beach, Toronto Gold Mining Company.
" 6, 10th " Tudor, Ottawa Mining Company, E. Miles.
" 23, 10th " Madoc, Upper and Co., Dunnville.
" 18, 5th " Madoc, Belleville Mining Company, M. Nider.
" 25, 4th " Madoc, Dr. Fraser, Prescott.

I certify that the above report of Longhead, Hurd, and Co.'s analyses, made by me for that office, is correct in every particular. W. B. OTWAY, M.D., &c.

THE PROGRESS OF MINING—AS A SCIENCE, AND SOURCE OF COMMERCIAL WEALTH—No. X.

SIR,—It has been said history reproduces itself. It would be good for the whole country if this saying could be made applicable to our Cornish mines. There is not a man in these realms, however indifferent he may be to the prosperity of the nation generally, but would rejoice at renewed success of mining in Cornwall. In the last twenty years the dividend mines known to the public in this kingdom have cost nearly two millions sterling, or about 1,867,000*l.*, and they have given profits of nearly 7,000,000*l.*, or 6,637,000*l.* This fact, notwithstanding a certain querulousness on the part of sufferers from mismanagement ought to bring encouragement to the hearts of those who are really determined to stand by mining through evil and good report. It is my intention in this letter, honestly hoping for a revival in mining, to take notice of the Mount's Bay mining district. The Bay of St. Michael's Mount forms a piece of scenery which, once seen, will ever be remembered. I venture to assert that one glimpse of the prospect from St. Michael's Mount will dwell upon the memory forever. St. Michael's Mount is a rugged pyramidical mountain, rising out of the centre of a bay or basin of water, the innermost curve of which is about three miles in diameter. The mount, which is a rough pyramid of granite, standing on a clay-slate basis, rises to the height of about 180 feet above the water. It would have been a truncated pyramid had not Art come to the aid of Nature, and finished the summit-line by the erection of a splendid Norman castle, culminating the angles of the sides in a graceful group of buildings, dominated by a high tower. If you were to fix the foot of a compass on the centre of St. Michael's Mount, and with a mile-and-half radius draw the half of a circle, beginning at Newlyn, it would pass through Mousehole, Penzance, and Marazion, Penzance lying in the north-western angle of the bay, and Marazion, or Market Jew about due north; but the whole landscape, seen from any side, with the Mount in the centre and the picturesque towns on the coast, forms an unrivalled view of coast scenery. On the north-eastern side of the Mount's Bay, elevated from 120 to 180 ft. above the level of the sea, extending for a mile, stands the site of the Old Wheal Neptune. When I was a boy, hundreds of times I have stood in the bow-windows of the upper rooms of the old account-house, watching the progress of the vessels as they coursed across the bay, giving animation to the beautiful picture; and now and then, but very seldom, you might see little light puffs of vapour on the back of the ocean, given by a steamer, a very unusual visitor in those early times, for this was fifty years ago. I recollect well, as I was then learning to write, being puzzled in the change of the year from 1817 to 1818, not being able to understand the change of the year fully, which impressed the date on my memory; but I recollect the history of Wheal Neptune two or three years sooner than this, when I was only five years old. I recollect the rejoicings for the peace after Waterloo. All the offices and ore-floorings were surrounded by tables, made of rough deal planks, for upwards of half-a-mile long; in the middle of all, under a large thorn tree before the door of the office, roasted a whole ox, turned by machinery made by the mine blacksmith. The agents, hoisted on rude chairs, were being carried on the miners' shoulders around the mine, and shouts and rejoicings in songs and rude verses celebrated the advent of peace. This was fifty-two years ago, and the mine was then in its acme of prosperity. Having said something of the exterior of this justly-celebrated country, let us take a glimpse of the subterranean laboratory, Nature's workshop, where these great masses of copper come from that are afterwards formed into so many beautiful objects for the use and ornament of man. If we suppose all the slate to be removed, we should see a number of walls running from east to west, which would make the famous walls of Babylon quite a puny affair. These great walls, sometimes formed of brass—or the elements that enter into it, for in places they are formed of copper, and in others of tin—being built up of coatings or incrustations of metal, so thin that probably 1000 of them would go to form the thickness of one inch. These great walls of metal, or lodes, extend lengthwise for miles, while in thickness they vary from 2 up to 20 or more feet, and in depth they run down for hundreds of fathoms. One is struck with astonishment when one contemplates the length of time necessary for accomplishing such work as this, as every coat is thinner than the coat of paint used on ordinary wood-work, and yet the whole forms a mass and solidity of rock that renders it difficult to fracture even in some places with gunpowder, but the order and regularity of these metallic formations is also something wonderful. The first wall, or lode, of copper in this district, beginning on the south and going westward, is found in Perran Boat-cove, where the old miners occasionally break off some copper from the vein at low water, but nothing on it has been done in effectual mining. Then comes the lode of Trenow Consols, then Old Wheal Neptune, then Great Wheal Neptune, the vein on which the new ore is found at Great Neptune, then comes the Wheal Prattle lode, then Wheal Caroline, then Owen Vean, then Trevelyan, then Wheal Friendship, then Penberthy Crofts, then Wheal Elizabeth, and next the Great Wheal Alfred. It is worthy of notice that these lodes are crossed by wide metal-bearing belts of rock, nearly at right angles, and when these veins coming down from Gwinear, Breage, and Germoe, traversing westward, pass into the metallic channels they usually become charged with copper or tin, or occasionally both. One of these great transverse channels of rock commences at the sea near Great Neptune. The Wheal Caroline lode does not seem yet to be followed back sufficiently to the westward for the Great Wheal Neptune channel of ore. The Wheal Caroline channel being the same with Owen Vean, Trevarthen Downs, Wheal Elizabeth, and other mines in that line; and one would conclude there ought to be a good mine on Wheal Caroline lode, somewhere between Giddy's shaft and the bold turn on the Marazion road. The East Neptune seems to be in the same channel with Wheal Caroline, and from the ore being discovered in those mines in the same parallel of the meridian from the well-known polar law affecting the crystallisation of metals, it would be only the fulfilment of the rule to find both these mines of East Neptune and Caroline bearing rich stores of metal, and forming a fountain of wealth for coming investors. M. F.

HISTORY OF MINING—No. XI.

SIR,—In my last two letters, inserted in the Journal, I endeavoured to show the influence of mining upon the progress of ancient and modern states, more especially upon that of Great Britain. Events have occurred since my last letter was published which confirm my statements, and upon which a few remarks will be appropriate, and I humbly hope not without use. At Barrow-in-Furness, in the north of Lancashire, a great celebration has taken place, and some very remarkable speeches have been made, upon which several of our leading daily newspapers have made eulogistic comments, and which are certain to be read all over the land, to the very great encouragement of the mining interest. The event celebrated in Barrow, as you are aware, was the opening of new docks, second only in area and depth to those of Birkenhead. The town of Barrow-in-Furness had been previously connected by railway with the leading lines which bring the great *entrepots* of Lancashire into communication with one another, and the rest of the kingdom. A few years ago Barrow was *non est* as a town, and was a very dim and dismal locality; now it has 20,000 inhabitants, is a place of great productive power, a port of considerable export, and is likely to rise more rapidly in population, influence, wealth, and power than even Birkenhead has done. What has been the occasion of this? How has the dreary promontory of "Lancashire over the Sands," to which people waded as often as they passed dry-shod, when the tide receded, arrived at this dignity and importance, so that two dukes, several other noblemen, the late Chancellor of the Exchequer, lieutenants and deputy-lieutenants of counties, and mayors of boroughs and cities, hasten to proclaim their admiration, and drink, in grave but joyful festivities, success to its prosperity? Sir, one word expresses the answer—"Mining." The miners' tools rang upon the ironstone, and resounded from the masses of carbon, before furnaces blazed, rails were laid, docks were excavated, churches sounded forth their solemn invitations by Sabbath bells, and a large town-hall arose in the centre of a prosperous population. It was not Long Island or Surat cotton that did this; it was not performed by Saxony or Australian wool; the silkworms of China, Italy, or France did not do it; Barrow did not spring up as a port of import to receive foreign produce more conveniently and expeditiously for the wants of the populous country behind, thereby occupying the position of a miniature Dublin or Bristol—it all came of Mining.

In my last letter I remarked that abroad "the miner has moved the wigwam out of the way of the city, by his instrumentality the white man displaces the red man, and the sound of the implements of civilisation has succeeded the wild war-whoop or hunting cry of the Indian." Well, Sir, that is true, and what has taken place in the dreary and isolated region of Furness is almost as startling. Mine shafts, furnaces, forges, warehouses, docks, ships, and a wealthy community are seen, where a few years ago the mists from the Irish Sea, the fogs of the flats, and the flight of the sea gull and wild fowl were the most frequent visitors. In my last letter I made use of another sentence, the truth of which Mr. Gladstone's speech affirms in a remarkable manner. My remarks were—"Wherever mining has been supported by capital in Great Britain the people, and the means of supporting the people, have multiplied, the national revenue has augmented, our ports have been filled with shipping, and civilisation in all its forms has been advanced." The whole tenor and scope of Mr. Gladstone's speech was to affirm this, one of the most important truths connected with the material interests of Great Britain which could possibly be impressed upon the public mind. There were some things said at the Barrow festival about Barrow itself likely to create erroneous notions about it among the public at a distance. From all the speeches delivered a stranger might suppose that Barrow had *always* been an insignificant place, and had only sprung into notoriety with a sudden bound. It has certainly risen quickly into population, wealth, and influence through the great extent to which its iron and coal field has been opened, but the importance of the place had been recognised long ago. Nothing can be farther from the truth than the tone of a leader in the columns of your contemporary, the *Times*, in which the neighbourhood of Barrow is represented as if without a history, except that it was, probably, once a burying place for the Norsemen, and that there was a celebrated ecclesiastical institution there—"Furness Abbey," established in the locality because it was wild, lonely, and out of the way.

As early as the reign of Henry VI. the harbour was described as "the very best haven for ships in all St. George's Channel." Mr. Gladstone declared in his speech that "Peel Harbour," by which the Barrow Docks are approached, "is one of the best in England." Forty years ago there was a large mineral yield in the district abutting upon Barrow. Mr. Baines, of Leeds, in his "History of Lancashire," which was published thirty-two years ago, states that in the previous year there had been 20,000 tons of iron raised in Furness, larger than any yield previously rendered, so that for nearly half a century the mineral field adjoining the new municipality has been productive, and is, therefore, no upstart in the realm of fame or utility. The railway, however has, during ten years given such scope for development that where 20,000 tons of iron were raised within a year thirty-three years ago, more than twenty times as much are raised in a year now. This circumstance should teach one lesson, which has not been rapidly learned in Britain—that in order to develope adequately our mineral resources, the means of cheap and rapid transit are essential. This has of late been proven in Wales, as well as on the shores of Lancaster.

In giving one of the toasts at the Barrow banquet, Mr. Gladstone asserted an opinion which I have more than once urged in my letters, that iron was less known than other metals in the primitive ages, and that copper was the plentiful, cheap, and useful metal of antiquity. The right hon. gentleman used, however, some language on this subject which requires much qualification. He observed, "Go back to barbarous life, and we find that in the earliest days of human history iron is absolutely unknown. Nay, when from stone and wood men began to pass to the use of metals, iron is still for a length of time practically unheard of, because of the difficulty with which it is wrought, and the extreme rarity with which it is found in a virgin state." This paragraph is endorsed with much panegyric by the whole daily press, especially by the *Times* and the *Standard*, no eulogists usually of the right hon. gentleman. You know better, Mr. Editor. When Mr. Gladstone tells us to "go back to barbarous life," he in the next sentence shows his meaning to be what he calls "the earliest stages in human history." No fallacy can be more common nor yet more easily exposed than this; but it is mischievous in various

ways, unnecessary here to specify. I have proved to you in former letters that in "the earliest ages of human history" men were not barbarous—that the primitive ages of the world were marked by a magnificent civilisation, as proved by the marble ruins of Cochin China, the marvellous architectural remains of Central America, the monuments and inscriptions of Egypt, and the excavations of Babylon and Nineveh. Such cities were erected as never appeared in the world since. London, and even Rome, in all their vastness, power, and riches, were surpassed by the glorious cities of remote antiquity. Men fell away from civilised to savage life, and lost the use of civilised appliances, resorting to wood and stone, and all the conditions of life to which their fallen or isolated state confined them. But in the earliest ages intelligence and civilisation prevailed. The philosophy of the unhappy change in the case of so many tribes of the human family is to be found in the sentence, "For the nations and kingdoms which will not serve thee shall perish; yea, these nations shall be utterly destroyed."

Mr. Gladstone represents iron as ten times the value of copper 3000 years ago. The opinion of some of the most travelled and scientific mineralogists, as well as practical miners known to me, is that the natives at a much earlier period found the way to bring iron extensively into use. Timber was plenty for smelting purposes, and efficient. Coal was brought little into use for the early iron manufactures of the South of England, and before the reign of Elizabeth the forests in the South of Ireland were used for this purpose. It is a question which Mr. Gladstone would find it difficult to solve—how, without the use of iron, however plentiful copper may have been, could the ancient cities of the world have been founded! The right hon. orator quite forgot his Scripture history when he fixed the date of 3000 years ago, or it may be that he ignores the chronology of Usher (Archbishop of Armagh), upon whose scientific authority the dates of our Bible margins rest: 3000 years ago vast regions of the East were studded with cities, the splendours and wealth of which, particularly in mineral treasure, pass all the bounds of modern experience, and almost of modern conception. Before that date Solomon had built his magnificent palace, had built the House of Lebanon; before that period the first Temple of Jerusalem was dedicated, with all its golden wealth, and architectural and artistic glory. Before that time Tyre and Sidon were marts of commerce; Nineveh was "that great city;" the Tower of "Great Babylon" had pointed up to heaven; the Pyramids of Egypt were reared; and, in a word, from the plains of Shinar to Upper Egypt vast cities, teeming with civilised population, shone in greatness and in grandeur. There can be now no doubt that in China and Mexico there was a simultaneous civilisation, displaying the same perception of the æsthetic, and the same wonderful resources in art.

In commenting upon the Barrow meeting, the *Times* describes the North of England as destitute of manufactures until the recent great development of its coal and iron fields. Why, Queen Elizabeth planted the woollen manufacture in Leeds, which had previously existed in Ireland. Three hundred years ago Manchester had 50,000 inhabitants, supported by weaving and dyeing, the great and varied water-power of the neighbourhood being a motive force for mills, and offering peculiar facilities for bleaching and dyeing. But neither Leeds nor Manchester would ever have become what they are but for the mines. At a comparatively early period, however, coal was found in Lancashire and Yorkshire, and applied to manufacturing purposes. At all events, it is a matter of congratulation to the mining interest in all its departments to find so high an authority as Mr. Gladstone recognising it as the grand foundation of wealth and civilisation.

Gresham House, London. THOMAS SPARGO.

THE CALDBECK FELLS (CONSOLIDATED) SILVER-LEAD AND COPPER MINING COMPANY (LIMITED).

SIR,—Something like two years have elapsed since the leading members of the Mining Market, accompanied by some of our best practical mining authorities, visited the property of this company, with the view of eliciting their opinion of its mineralogical capabilities and value. Having severally minutely inspected the extensive mines, each expressed but one decided opinion—that, if developed with judgment, skill, and economy, Caldbeck Fells Mines could not fail to be as profitably productive as any lead mine in the United Kingdom. The favourable way in which the property was received by the public was, in some small degree, induced by the statement that among the properties acquired was the celebrated Roughton Gill Mine, which sometime since was worked by the late Robert Stephenson (the eminent engineer), the late Hugh Pattinson (the inventor of the desilvering process), and Thomas Sopwith, F.R.S. (manager of the W. B. Lead Mines), when it gave for many years profits amounting to 700 and 800 per cent. per annum, or upon every 12*l.* share from 80*l.* to 100*l.* yearly. To this was added the opinion of no less an authority than Captain Trevillion (of Herodsfoot), who is the manager of one of the richest lead mines in Cornwall, and by his association is thoroughly familiar with the resources of West Chiverton (having inspected that property before it came into the hands of the present company). Now, Capt. Trevillion hesitated not to stake his professional reputation upon the statement (which he did not make until after he had minutely inspected the mines), "*that in mineral value there is nothing in Cornwall to be compared with it;*" and Mr. Josiah Hitchins, who I believe claims to be the discoverer of Devon Great Consols, also stated that "it only requires sufficient means to open the veins, extract the ores, and reduce them on the magnitude of such mines as the Devon Consols, St. John del Rey, &c., to place them in a correspondingly remunerative and lasting condition."

Among the deputation who subsequently visited the mines was Capt. Trevillion, who then confirmed—indeed, more than confirmed—all he had previously written in his report, which was further substantiated by Mr. Kendal, of Redruth, who, if possible, spoke even more confidently than anyone present as to the great value of the property.

My object in drawing attention to these statements is to ascertain from these authorities, who are supposed to be—in fact, profess to be—mining guides or monitors, and upon whose opinion many, doubtless, like myself, were induced to become interested in the enterprise, what cause they have to assign that their publicly-expressed opinions still remain unrealised. I have no doubt their answer will be that sufficient time has not yet elapsed to develope such an extensive property upon a remunerative scale, and they may also reply that the fact that the monthly samplings exceed 50 tons of ore, a large proportion of which is the unmistakable blue ore, which is at all times so gladdening to the eyes of a miner; but is this, I would respectfully ask, a sufficient result from the extraordinary expectations held out by the above-named "Practicals?"

I would not have it for one moment supposed that it is my object to disparage the value of the property either in the eyes of the shareholders or the public; on the contrary, my conviction is greater than ever that we possess mines which, upon development, will vie with Great Laxey, to which it has been likened both in extent and character by several Isle of Man miners; but the local directors, who are entrusted with the conduct of the mine, either are doing more than the monthly reports of the agents would indicate, or, if not, the property is not being developed with that skill and energy which its merits deservedly warrant—that is, if the opinions of the authorities cited above are based upon reliable data.

Before concluding, I might be allowed to make two suggestions, which I venture to think will, if adopted, be fully appreciated by my co-shareholders. One is that the general meetings—like those of Great Laxey—should be held alternately in London; and the other is that the directors should request the manager at the mine to value the different points of operation, in a similar way to that adopted by Capt. Rowe, of Great Laxey. For an ordinary shareholder it is not enough to know that a lode in any particular part is worth (say) 2 or 3 tons of ore per fathom, whereas if it were stated (as Capt. Rowe states) that it was worth (say) 30*l.* or 40*l.* per fathom, the merest tyro could form at least an approximate idea of the monthly results—that is, he could deduct the amount paid per fathom for driving and sinking, and also the surface charges—and thus some notion could be formed as to what financial progress was being made. By the adoption of these suggestions, the directors would receive the thanks of many shareholders.

ONE WHO PAID A PREMIUM FOR HIS SHARES.

CHIVERTON MOOR.

SIR,—It is gratifying to learn that the remarks in the Journal of Sept. 14, relative to the improvements at this mine in the 65 fm. level, west of engine-shaft, have been confirmed by the agents' report in last week's Journal. The lode in that level was then reported worth 10*l.* per fathom, and the lode in the 65, east of the shaft, was producing stones of silver-lead, with a very promising appearance. These and sinking the engine-shaft, to get access to the lode at the 75, are the points to push, and I hope the agents will direct their energies in this quarter, and do nothing (except working on profitable ground, if any) west of the flat-rod shaft. At present we have no reason to desire too close a connection with Chiverton Valley sett, but there is every probability that we should approach our rich neighbours to the east, and, as your correspondent aptly observed, try to get a slice of their rich nuggets. It seems that your correspondent's favourable remarks relative to South Chiverton Mine are likely soon to be realised—a good lode of silver-lead ore having been cut in the 45 fm. level within the last week or two; this is certainly good news for the shareholders, and the district generally.

MINER'S FRIEND.

DRAKE WALLS AND WEST DRAKE WALLS MINES.

SIR,—Since the meeting, held in July last, the committee of management, keeping in view the recommendation contained in the manager's report, to erect stamps to be attached to Brenton's engine, and seeing the improved state of the tin market, have been anxiously considering the advisability of carrying the recommendation into effect. A recent improvement having taken place in the mine, and the tin market having considerably improved, they instructed the manager to make careful estimate of the probable costs of erecting stamps, and the future returns, also to make enquiries where suitable second-hand stamps might be bought, and on Friday last they met at the office of the purser to receive a report from the manager, who stated that he had received from different parties offers of suitable stamps, and that he still strongly recommended they should be immediately erected and set to work. After due consideration, and carefully examining the estimates of costs and probable returns, the committee unanimously agreed to accept the offer of Mr. Wm. Derry, to supply two stamps axles of 24 heads each with all the outfit, and that immediate steps be taken to erect the same. The improvement referred to is in the adit level, and computed at the present time to be worth 20*l.* per fathom. Thousands of tons of tinstuff already at surface from actual trial it is found can be profitably made marketable by stamping power, which could not be made available by crushing; consequently, it is hoped, by the new process the costs of the erection of the new machinery will all be met without making a call on the shareholders. Profit beyond this and in the future will depend on the price of tin, but with the recent rise and the apparent firmness of the market it is hoped this and more may be effected. At West Drake Walls a shaft has been sunk about 12 fms., when the influx of water became so great it was found necessary to suspend it. In the meantime a 40-inch engine has been purchased, and is on the mine; the masons have been building an engine-house, which has been roofed in this week; and the necessary works are and have been carried on vigorously to develope the mine. It is hoped and believed at each mine soon after the machinery is set to work good results will follow.—*Sept.* 25.

RICHARD CLOGG.

DON PEDRO NORTH DEL REY, AND ITS PROSPECTS.

SIR,—By the last mail has been received the satisfactory intelligence of the completion, several weeks earlier than was calculated upon, of the communication between Alice's level and the workings below Hilcke's level, and there is now no impediment to the prosecution of the search for the shoot of gold which was cut off by fissures about the end of May. Should this be met with shortly, as there is every reason to suppose it will be, from the fact of the lode itself, in which the shoot is enclosed, holding its way through the fissures, the produce will soon be increased; but it becomes a question how long it may be before there will again be need of ventilation at a lower level. It took about four months to follow the shoot from Hilcke's level to its present depth, and if the dip of the bunch continues the same, the workings will again be brought to a standstill for want of ventilation at the end of another four months; but the next level (the shallow adit) required to meet them being still nearly 200 fms distant, it will be something like a year before a communication can again be effected; and as at each deeper level a much longer cross-cut into the hill will be necessary, each interval of suspension must be longer than the preceding one. This is taking it for granted that the dip continues as above stated, but on looking at the plan issued with the last annual report, it will be seen that, although the lines and bunches of gold alternately ascend and descend, they maintain on the average a nearly horizontal position, and it is only from the middle level they seem to have taken a decided dip. From this I am led to believe that they will be found to ascend when again met with, or shortly afterwards, and that their undulating course will continue. It is needless to refer to the important advantage it would be to the mine should this surmise prove to be correct; but, in confirmation of it, it can scarcely escape notice how remarkably the outline of the surface of the open cutting left by the old workers resembles the course of the lines and shoots of gold as shown beneath it; and the inference to be drawn from this is, that a similar shoot of gold formerly existed there, and that the present surface remains as it was left by the old miners in following the course of it. Pursuing this idea, and seeing at how shallow a depth are the lines now being worked upon, it is only reasonable to suppose that a series of these lines existed at short intervals to the summit of the hill, which has been entirely removed to a depth of 250 to 300 feet for over a quarter of a mile in length on the course of the jacotinga beds, and for half a mile across them. These enormous cuttings afford sufficient evidence as to the riches extracted in former times, and tangible proof has been given that exhaustion was not the cause of their being abandoned. Capt. Treloar attributes their suspension to the sides of the open cuttings closing and overwhelming the works, the debris from which has since been washed away by a hundred rainy seasons, and this, probably, is the true solution.

Vast, however, as these cuttings are, they form but a very small part of the property; and as the levels are extended eastward they go into virgin ground, first acquiring additional depth from the incline of the cutting, and thence into a mountain of jacotinga, giving 130 fms. of backs above the shallow level, and a depth of 80 fms. down to water level; and at the junction between the spur and the mountain, some 50 or 60 fms. distant, Capt. Treloar thinks (in his own words) "something grand will be found;" and besides this, it is fairly to be expected that a series of shoots will be found in the mountain, similar to those extracted by the ancient miners from the lower hill.

The shareholders have lately been favoured with circulars referring to the uncertain nature of the formation in which these mines are situated; but from the commencement of the workings in March, 1866, the produce of the general work from the lodes has been exceedingly regular; and, even with the limited means at command for washing and crushing, has always afforded a monthly profit, increased, of course, very largely by the occasional rich shoots and bunches of gold, notwithstanding the heavy temporary expenses of buildings, washing strakes, stamps, &c., have all been charged in the costs. The stoping ground left in reserve is very extensive, and in a short time the new washing strakes will be at work, when, owing to the larger quantity of ore treated, a corresponding increase in the profits may be safely looked for.

The great difficulty to be contended with hitherto has been the want of hands, which has prevented explorations of the other beds of jacotinga. The shallow adit mentioned above will, however, soon intersect the fifth bed; and as the ancient workings on this level have been much larger than those on the third bed, whence all the produce hitherto has been derived, a fresh source of profit may be opened there, and the value of the mine doubled at once.

In conclusion, to ease the anxiety of our circular-sending friends, it may not be amiss to quote the opinion of Capt. Treloar, as expressed in his last annual report, December, 1866; and to let them judge by the results already attained how far his anticipations are likely to be realised. It is as follows:—"I repeat again and again that I have no desire to raise expectations unduly; but, be the result ultimately what it may, I cannot look upon the great extent of our jacotinga formations, at their elevation and freedom from water, at their almost virgin state, at the character and quantity of gold extracted (7861 ozs. during the last ten months*), and at the present position and small scale of our works, without feeling that our prospects are magnificent." A SHAREHOLDER.

* The quantity for the seven months ending July, the last month reported, is 13,954 ozs.

FRONTINO AND BOLIVIA (SOUTH AMERICAN) GOLD MINING COMPANY.

SIR,—I perused the details of the last general meeting at the time they were reported in the *Mining Journal*, and if my memory serves me I think the Chairman, on behalf of the directors, promised that henceforth the shareholders should be made acquainted with the general tenour of the advices as they were received by the West India packet. As far as the promise was concerned, it was all that even the most exacting shareholder could desire, but, singularly enough, the fair promise has been for some reason or other totally disregarded, inasmuch, as far as I have seen, the advices have not been published.

I am fully aware that the Republic of New Granada has been in a state of disruption, and that a sort of civil warfare has rendered postal communications next to impossible; but seeing that the shares are quoted in the market one day ¼ to ½, and the next ¼ to ¾, and then ⅞ to 1, and a few days after again ½ to ¾—a very wide price—it is certain there are transactions taking place which, we are bound to assume, are not concluded in the absence of some sort of information. Taking all circumstances into consideration, it really becomes a serious question with the *bona fide* shareholder whether, notwithstanding all the assurance to the contrary on the part of the directors, the better course is not, after all, to ensure as much as can be secured by realising his holdings at whatever prices it will fetch, and thus rid him of that which is flatteringly designated the merely contingent liability of 5*s.* per share. We, as shareholders, must not allow ourselves to forget this fact, that if we sell our shares at only 5*s.* per share, and save that which I cannot but regard as not a contingent but a certain liability of an equal amount, we shall clearly benefit ourselves to the extent of 10*s.* per share—a consideration of no small importance to a large holder.

If the directors are the shareholders' trustees they certainly do not appear to conscientiously consider the importance of their trust, for if satisfactory information is received, whose claim to it is prior to that of the shareholders? And if, on the other hand, the intelligence is unsatisfactory—which the decline in the market value of the shares would induce the belief is the case—upon what ground, I would ask, is it withheld by the shareholders' trustees? Without a single exception, every other foreign mining company publishes its advices upon the arrival of the mail; and why the Frontino and Bolivia Company should persist in pursuing an opposite course, and in which the shareholders alone are the sufferers, is to me a matter of great surprise. I had hoped that, with the promised improved *regimé*, this enterprise,—the chequered career of which has been so often referred to in your columns—would have been extricated from that ignoble slough of despond in which it has been wallowing for so long a period.

Sept. 25. A DISAPPOINTED SHAREHOLDER.

MINERAL WEALTH OF CHINA.—The Smithsonian Institution of Washington has published, in the quarto series of its "Contributions to Knowledge," the "Geological Researches" of Raphael Pumpelly, of New York, "in China, Mongolia, and Japan, during the years 1862 to 1865." "The principal results arrived at," says the Secretary of the Institution in his annual report to the Board of Regents, "are as follows:—There is reason to believe that there exists throughout China an immense development of Devonian limestone, which rises to the surface in all the larger ridges, and attains in some places a thickness of 10,000 feet. The formations beneath this limestone, as far as they were seen, are either granitic rock or metamorphic schist, unconformably stratified as regards the limestone. Overlying the limestone there exists in almost every part of the country a great coal-bearing formation of sandstone, shales, conglomerates, &c., in nearly (if not quite) conformable stratification as regards the floor on which they rest. The fossil plants obtained from this formation are considered supra-carboniferous; and it is supposed that the coal fields of China, which vie with our own in extent, are referable to the Triassic period. Although from the limited range of actual observation it would be too much to assert that there is a total absence of any later formation than these coal measures, still the author failed to observe any traces of them." "Among the more economical results obtained may be mentioned a large number of extensive coal basins, and the deposits of other useful minerals, which are so widely distributed throughout the empire as to warrant the belief that China scarcely stands second to any other country in regard to the quantity and quality of its coal and its other mineral resources. Such gifts of nature, says the author, combined as they are with a variety of favourable circumstances, cannot long be unappreciated. They are the elements of the civilisation of the present age; and in the natural course of events the country possessing them cannot long avoid being drawn into the stream of industrial and intellectual progress." In the second chapter of his work (which was read before the National Academy of Sciences, and recommended by that association to the Smithsonian Institution for publication), the author, giving an account of his observations in the basin of the Yangtse Kiang, speaks of the rapids that render one portion of the "Great River" so dangerous:—"Here, within a distance of 80 miles, are the principal rapids, while the river traverses the limestone through a series of five gorges, unsurpassed in the grandeur of their scenery. The Yangtse, which, a few miles below the mouth of the Ichang gorge, has a width of 950 yards, is in this narrowed to 250, and in the Fungsiang gorge to 150 yards. (Blackiston: Five Months on the Upper Yangtse). In these narrow passages, whose walls are from 900 to 1200 ft. high, cliffs of bare rocks, often vertical or overhanging, alternate with deep declivities, clothed in green from the water to the summit, and with deep, inaccessible dells, filled with the rich growth of a semi-tropical vegetation. Streams flowing from the mouths of caverns, high above the river, cool the air in their descent, while the huge clusters of stalactite which they have formed—the work of ages—show well the chemical power of the smallest drop, side by side with the mechanical force of the rolling river. Through these gloomy chasms the skilful boatmen drag the heavy junks; now 'tracking' them from paths and steps hewn in the solid rocks, now pulling them by rusty and time-worn chains clamped along the vertical walls. The depth of the water must be very great (Blackiston's party found no bottom with 18 fms.); and the difference between high and low water is said to be as much as 80 feet in the Ichang gorge."

Meetings of Mining Companies.

ALAMILLOS COMPANY (LIMITED).

The half-yearly meeting of shareholders was held at the offices, Queen-street-place, on Thursday,—Mr. J. P. JUDD in the chair.

Mr. H. SWAFFIELD (the secretary) read the notice convening the meeting. The report of the directors stated that in March they ventured an opinion that some profit would be made during the half-year that had then been entered upon, but, viewing the whole of the circumstances connected with the company, they believed that the amount would be but small; the result, however, has exceeded their expectations, the profit having reached the sum of 2009*l.* 19*s.* 9*d.* Thus it will be seen that the company has made satisfactory progress. This has been attained by lessening expenditure as much as possible, rather than by putting an undue strain on the resources of the mines. They have debited the amount expended on new machinery during the past half-year to the working costs, so that the plant account remains unaltered. The amount standing to the profit and loss account is 2037*l.* 7*s.* 3*d.*; out of this sum the directors propose to carry to depreciation account, 250*l.*; and to pay a dividend on Oct. 12 next of 1*s.* per share, 1750*l.*=2000*l.* A great quantity of sterile ground has had to be driven through in consequence of the injurious effect of the slide or fault. Fortunately, some of the workings are now below this unproductive floor of ground, and there is great reason to believe that the lode will again be as productive as it was in the upper levels. This view is confirmed by the important discovery lately made at the fourth level in cross cutting from La Magdalena shaft, where an excellent lode has been met with, worth at different points from 3 to 5 tons per fm. The raisings of lead ore have averaged 221 tons per month, and are being continued at about the same rate. The reserves of ore have not been diminished; they remain as last reported—2200 tons. The conversion of ore into pig-lead has been conducted at Cordova as hitherto. Both the assay of the ore and the produce from the furnaces have been good, and the smelting cost lessened. The Ballesta coal is doing excellent duty, and the full advantage of it as a cheap fuel will be experienced during the present half-year. The cost of transport has always been a serious item in the accounts of companies working mines in the Linares district; but during the past half-year the following reductions have been made as the result of negociations with the Madrid Railway Company:—On lead ore between the mines and Cordova, 4*s.* 8½*d.* per ton; on coal between the mines and Cordova, 6*s.* 5½*d.* per ton. Judging from the costs and returns since June 30, the mines are still yielding a satisfactory profit; and hence the directors hope that the next accounts they may have to present will be even more gratifying than those now rendered.

The CHAIRMAN said the directors had followed out the wishes expressed by the shareholders at the last meeting—that the report and accounts should be sent out prior to the meeting. Therefore, there was nothing whatever for him to say, excepting that the current half-year promised to be equally as good as the one just concluded, and he could only say that he hoped the dividends on future occasions would be of rather larger dimensions than that just declared. He moved that the report and accounts be received and adopted.

Mr. W. COX seconded the proposition.

Mr. JOHN TAYLOR explained that the eastern part of the mine had fallen off, but in the principal part, the centre, it appeared equally as promising as in the western extremity. The agent had the greatest confidence that he would be able not only to maintain the present returns, but to increase them; and he (Mr. Taylor) could not help thinking that during the current half-year some important improvements would take place. Their great object would be to get this part of the mine, which was quite large enough for them, economically worked, which could better be done than by extending the works. The agent recently secured an additional pertinencia, which he considered to be of great value—it would not cost more than 30*l.* or 40*l.* The reserves of ore in sight at Alamillos were about 2000 tons, and they could not at present afford to increase the quantity. The mine was admirably stocked with machinery, which was of a most effective character.—The reports and accounts were received and adopted.

A vote of thanks to the Chairman and directors terminated the proceedings.

FORTUNA COMPANY (LIMITED).

The half-yearly meeting of shareholders was held at the offices, Queen-street-place, on Thursday,—Mr. CHAS. MORRIS in the chair.

Mr. H. SWAFFIELD (the secretary) read the notice convening the meeting. The report of the directors stated that the operations of the company during the past six months have been conducted on a much larger scale than before, and the quantity of ore raised has reached 2763 tons, an average of 460 tons per month, which is an increase of 67 tons per month on the previous half-year. To produce so large a quantity of ore, the mines' costs have necessarily been heavy. The result of the six months' operations has been a profit of 594*l.* 11*s.* 4*d.*, which, having regard to the low price of lead, is highly satisfactory. Whilst the directors have considered that they might fairly reduce the quantity of ore in reserve, they have not neglected to urge the prosecution of the works of trial, so as to open out new ore ground to replace that which has been taken away. Some good discoveries have been made. The Canada Incosa Mine, which has now become very extensive, will be worked more economically than heretofore, as the water cost will be lessened, not merely from the smaller consumption of coal by the new engine, but also from the cheaper rate at which coal is now being purchased. At the Salidos Mine the costs will continue to be heavy, as the erection of the engine taken from Canado Incosa must be carried out forthwith. The smelting of the ore has been satisfactory, and the produce from the furnaces good. The smelting cost has been lessened by nearly 10*s.* per ton, in consequence of the reduced price of coal. The directors have again been in treaty with the Madrid Railway Company for a reduction in their transport tariff, and they are happy to state that a reduction has been obtained that will lessen the item of carriage about 1000*l.* per annum. The directors have again written off 1500*l.* as depreciation on machinery, charging the same to the profit and loss account. The outlay on new machinery during the half-year has been 1024*l.* 9*s.* 2*d.* The balance standing to the credit of profit and loss account has enabled the directors to declare a dividend of 2*s.* per share; and should the present half-year be attended with the favourable results which they anticipate, they hope to be enabled to announce a further distribution of profits at the next general meeting.

The CHAIRMAN had no doubt the shareholders would consider the report and accounts as very satisfactory, and the first question they would probably ask was whether this prosperity was likely to continue. For his part, he was of opinion they certainly would not have any retrograde movement. There was, however, this qualification—if the price of lead did not go down; but, as far as that was concerned, he thought there was every probability that the price would rather advance than decline. They would have the full benefit of a reduced cost for carriage, and of coal. He could not let the present opportunity pass without expressing the great loss they had sustained by the demise of their friend, Mr. Crosby, whose attention to his duties as director was indefatigable, and whose mode of doing business made him an agreeable coadjutor. He moved that the report and accounts be received and adopted.

Mr. JOHN TAYLOR said that 3750*l.* of the debenture debt would be paid off in February, and that when paid off there would be left a surplus of 2000*l.* towards the next payment. As far as their engine-power was concerned, it was abundant to last them for years to come; and the mine generally had never been in a better state of working. The levels had, perhaps, been richer than at the present moment, but there were now a great many parts of the mine looking well. The agent had been raising a considerable quantity of ore. In the meantime, a large portion of the mine had been dormant, and there was reason to believe that some important discoveries would there be made.—Mr. PALGRAVE said that financially the company was never in a better position.

The report and accounts were received and adopted. A vote of thanks to the Chairman and directors terminated the proceedings.

LINARES LEAD MINING COMPANY (LIMITED).

The half-yearly meeting of shareholders was held at the offices, Queen-street-place, on Thursday,—Mr. WILLIAM COX in the chair.

Mr. SWAFFIELD (secretary) read the notice convening the meeting.

The report of the directors stated that the working account of Pozo Ancho Mine shows a profit on the six months of 428*l.* 11*s.* 5*d.* This account has been burdened with about the heavy costs incurred in changing the pumpwork at Warne's and Crosby's shafts; but, as this work is now near its completion, the expenditure under the head of mines' cost will be materially diminished during the present half-year. The Pozo Ancho Mine has produced during the half-year 1701 tons of lead ore, 1201 tons of which have been the result of new discoveries; the remaining 500 tons have, according to the estimates sent home, been taken from the reserves. A valuable run of ore ground will be opened up between Warne's and Crosby's shafts so soon as the 85 is reached, and it is expected that the raisings will be materially assisted from this source during the present half-year. In the old mine the workings will now be chiefly confined to the more productive parts of the lode. At Taylor's shaft (the extreme east of the mine) a considerable quantity of ore yet remains. The lode in the Francisco and Victoria pertinencias, although small, is still turning out well, and will continue to assist the samplings of ore. Considerable progress has been made towards the development of the Quinientos Mine since March. The engine, which had then been purchased, has since been received at the mine, erected, and set to work, and is now doing very efficient duty. The sinking of the engine-shaft has been commenced, and the agents will soon be in a position to report on the appearance of the lodes. The total expenditure on this property since its purchase amounts to 1927*l.* 15*s.* Mr. Shaw bears testimony to the advantages that had been derived from the use of the Ballesta coal; the smelting costs have, consequently, been very light during the last three or four months of the half-year, but in the previous months the expenditure was heavy, as the consumption of coals was rather large, and several important repairs to the furnaces had to be carried out. A full supply of Spanish coal is now being received at the works, and the furnaces are yielding satisfactorily, so that the present half-year's work promises to be good.

The Madrid Railway Company have conceded a reduction of upwards of 30 per cent. on their rates of carriage between the Linares and Cordova stations, which, on the quantity of ore and coals sent on that line of railway, will amount to a saving of about 1200*l.* per annum to this company. The market for pig-lead has continued dull, and the current price of good Spanish lead has been about 19*l.* 5*s.* per ton. A better demand has sprung up of late, and the directors look forward to an advance. The amount of profit realised during the past half-year, added to the previous balance of undivided profits, has enabled the directors to declare

a dividend of 2s. per share. The result of the present half-year's working will greatly depend on the quantity of ore that may be raised; but, judging from what is being done, there is reason to expect that a larger amount of profit will be made than that shown in the accounts now presented.

The CHAIRMAN having referred to the lamented decease of Mr. Crosby, their late Chairman, and to his (Mr. Cox's) election by his coadjutors to that position, he stated that inasmuch as, in accordance with the expressed wishes of the shareholders, the reports and accounts had been printed and circulated among the shareholders, there really was nothing left for him but to express a willingness on the part of himself and his brother directors to afford any information beyond that already communicated. He might, however, add that the directors thought that as small profits had been accumulating from time to time, that a long period had elapsed since a dividend was declared, and there being cash in hand to the credit of profit and loss account, and the financial position of the company enabling them to do so, that, taking all these circumstances into consideration, the directors thought it but fair and right that the profit should be divided among the shareholders, and hence the dividend of 2s. per share had been declared. As to the Quinientos Mine, it must be a satisfaction to know that the directors had the confident belief that the sum of 7000l. which the shareholders intimated their willingness to expend to fully prove the mine would be amply sufficient. If the mine should turn out as they expected, then the Linares Company would be resuscitated; but if, on the contrary, they met with disappointment, which would be contrary to the expectations of everybody who had seen or knew the mine, reputed to be the best in the Linares district, even then they would have left some 10,000l. or 12,000l. of unexpended capital to divide among the shareholders.

Col. PEARSON asked whether there was not a probability of it proving to be a wet mine?——Mr. JOHN TAYLOR (manager) said there was no doubt that when a certain depth was reached water would be met with. Although the water was too heavy for the ordinary pumping processes of the country, for steam-power it was comparatively slight. He did not believe there was a drop of water in the mine more than would be required for washing the ore. The engine was abundantly powerful to carry the mine down to a depth sufficient to prove it. He added that exactly at the point which they had chosen for the shaft (which was an old shaft) there was a cross vein, but at the intersection there was a very good rib of ore. He believed the site chosen to be a very good one—at any rate, they proposed to sink as fast as possible. The vein was the best they had in the Fortuna Mine, and the best in the whole of the Linares district. There was a small vein, called San Francisco, which was turning out very well; it was a misfortune that in the days of their prosperity driving was not extended towards this vein. The appearances at the bottom of the mine were now better than they ever had been. The agent reported that he would be able to maintain the present quantity of ore for a long period, and that would give them a profit.

The CHAIRMAN said if an advance in the price of lead took place, that not only would a profit be realised, but the directors would be able to pay good dividends. He moved that the report and balance-sheet be received and adopted.

Mr. BRAND seconded the proposition.

The CHAIRMAN, in reply to a question, stated that the 7000l. would enable them to sink in more than one place in the Quinientos Mine, but after that expenditure had been incurred there would be left 10,000l. to 12,000l. of unexpended capital, in the shape of lead and lead ore, and without reckoning anything for plant, machinery, &c.

Mr. JOHN TAYLOR referred to the reduction of the general working cost, stating that they were now pumping more water for 1s. than they did originally for 2s. The mine was never in such a position as it now is with regard to machinery, consequently, the cost of working was considerably reduced. Fuel was decidedly cheaper, for now they were able to buy it in the country instead of sending it from England.

The report and balance-sheet were received and adopted.

Upon the proposition of Mr. OLIVIER, seconded by Mr. ROBERTS, a unanimous vote of thanks was passed to the Chairman and directors.

The CHAIRMAN acknowledged the vote, when the proceedings terminated.

FOREIGN MINING AND METALLURGY.

The advices received with regard to the coal trade of the Pas-de-Calais report the same activity as hitherto in the extraction and deliveries. We have arrived, in fact, at the period of large winter purchases; sugar manufacturers, who last year had to pay dearly for tardily made purchases of coal, are now taking their precautions beforehand, and are filling their warehouses. There are, in consequence, scarcely any stocks, while prices are well maintained; it is even stated, indeed, that contracts for the Haute-Marne and the Seine-Inférieure have been cancelled, from an inability to execute them. In the Nord the same state of things prevails, deliveries being very active, and prices remunerative. The capital fact of the week is the conclusion of a contract for 100,000 tons of ordinary all-coming coal, between the Anzin Company and Roubaix Industrials, at 10s. 5d. per ton, free on trucks. It appears that during the first six months of this year the imports of minerals into France amounted to 245,356 tons, presenting an augmentation of 19,223 tons over the corresponding period of 1866; it is Algeria which now forwards the most minerals to France. The Paris, Lyons, and Mediterranean Railway Company has ordered 1000 tons of rails from the Firminy (Loire) Works; these rails are to be made according to the process of M. Pierre Martin. The Eastern of France Railway Company has ordered 900 tons of switches, at 7l. 11s. 10d. per ton, from the Hayange Works. The same company has also ordered from Messrs. Vivaux and Co., of Dammarie, in the Meuse, 15 cranes, in which iron figures to but a small extent, at 17l. 4s. per ton. The last fair at Besançon resulted in no fixed quotation for pig, affairs being almost completely nil. An official report on the state of metallurgical industry in the Doubs depicts it in gloomy colours. The Prefect of the Moselle, in his report to the council-general of that department, observes:—"Notwithstanding the augmentation in the production of pig, iron, and copper, the metallurgical industry of the Moselle is in a suffering state, and there is an encumbrance of goods; this state of affairs is attributed to the fear of war, the rapid development of new establishments in the department, and to the rather considerable rise in Prussian and Belgian coal and coke. The Moselle comprises twenty concessions of mines, of which only eleven were worked in 1866. The extraction of these eleven mines amounted in 1865 to 486,527 tons, and in 1866 to 610,397 tons, showing an excess in 1866 over 1865 of 123,870 tons. Other applications for concessions are at present submitted to the Government. There are eleven concessions of coal mines in the Moselle, but only three are at present in activity—Lhopital, Carling, and Schoenecher." The Douvrin (Pas-de-Calais) Company will pay, Oct. 1, interest on its shares for the exercise 1866-7, or 1l. per share. The Montrambert and Beraudière Collieries Company will pay, Oct. 16, a dividend for the first half of 1867, or 4s. per share. Meetings are announced as follows:—Stiring Collieries Company, Sept. 28, at Paris; Sougland and Fourmies Forges and Foundries Company, Sept. 28, at Paris; Andennes Metallurgical Company, Oct. 1, at Andenelle; St. Eloi (Puy-de-Dôme) Collieries and Railway Company, Oct. 10, Paris.

The forges in the basin of the Sarre have received some orders, but it has been found necessary to reduce prices. It is stated that an establishment in the neighbourhood of Sarrebruck has placed iron at 8l. per ton at the works; this price, which is regarded as bad by the forges on the right bank of the Sarre, would be very good for the forges on the left bank of the same river. The Sarre Canal has singularly improved the position of the metallurgical works of the Sarrebruck group; those works are well situated, for combustible and minerals now reach them at very moderate rates. With combustible and minerals at low prices, and with improved tools, iron may certainly be produced at a cheap rate. Meetings are announced as follows:—Hoerde Mines and Ironworks Company, Sept. 28, at Hoerde; Rhine Mining Company, Oct. 9, at Cologne.

The exports of coal from Belgium in July showed an increase of 19,000 tons, as compared with July, 1866. The whole of the exports of the first seven months of this year amounted to 1,930,000 tons, while for the same period of 1866 they were 2,198,000 tons; there was, then, a decline in the imports, to July 31 this year, of 268,000 tons, as compared with 1866. This diminution arose to a great extent in the decline in the exports to France, which only comprised 1,868,000 tons to July 31 this year, as compared with 2,112,000 tons in the first seven months of 1866. The deliveries made to Holland continue to decrease, having sunk to 55,000 tons to July 31 this year, as compared with 76,000 tons in the corresponding period of 1866, and 103,000 tons in the corresponding period of 1865. The exports of coke from Belgium to July 31 this year were 318,000 tons, as compared with 313,000 tons in the corresponding period of 1866. The importations of coal and coke into Belgium have acquired during the last two years a continually increasing importance; thus, while they only amounted in the first seven months of this year to 47,000 tons, and in the first seven months of 1866 to 63,000 tons, they rose in the first seven months of this year to 239,000 tons,—a considerable difference in so short a period. The greater part of the foreign supplies made available are received from Prussia and England. Thus while Belgium in the first seven months of 1865 received from Prussia only 465 tons of coal, the quantity which came to hand from the same quarter in the first seven months of 1866 was 2638 tons, and in the first seven months of 1867, 119,569 tons. Of coke, 245 tons were imported into Belgium in the first seven months of 1865, while the total rose in the same period of 1866 to 361 tons, and in the same period of 1867 to 15,353 tons. The greater part of the coke imported into Belgium this year has come from Prussia. It is understood that the Belgian State Railways administration has received tenders for coal at a still lower rate than that indicated last week—9s. 2d. per ton. Transactions in coal have been rather active of late in the Liége basin where prices continue to be well maintained; in the Charleroi and Couchant de Mons basins the situation has not changed materially; stocks remain stationary, but prices are variable. The exports of pig from Belgium amount for the first seven months of 1867 to 7000 tons, presenting a diminution of 3400 tons as compared with the corresponding period of 1866; in July, however, the exports were 1900 tons, as compared with 1073 tons in July, 1866. The exports of rails from Belgium in the first seven months of this year amounted to 59,800 tons, as compared with 36,900 tons in the corresponding period of 1866, showing a difference of nearly 23,000 tons in favour of this year; the greater part of the rail exports were made to Russia. A contrary movement is at the present time observed with regard to plates, the exports of the same having fallen from 10,250 tons in the first seven months of 1866 to 7685 tons in the first seven months of 1867. In merchants' iron there was also a decline, 33,600 tons having been exported to July 31 last year, and only 31,143 tons in the corresponding period of this year. The exports of minerals from Belgium, which amounted in the first seven months of 1866 to 98,900 tons, declined in the corresponding period of this year to 94,400 tons. The imports of minerals into Belgium have sensibly declined this year, having amounted to July 31 this year to 158,200 tons, while in the corresponding period of 1866 they rose to 190,400 tons. The imports of pig have, on the contrary, increased; thus while they were only 16,600 tons in the first seven months of 1866, they rose in the corresponding period of 1867 to 34,500 tons. The greater part of the pig imported into Belgium this year came from England. The deliveries of rails to Russia, which have maintained a certain activity in Belgian siderurgical establishments, are now approaching a conclusion. Within the last few days, however, a contract for 20,000 tons of rails, with accessories, has been concluded by M. de Kislauski, an officer of the Russian Imperial Corps of Bridges and Roads, with the John Cockerill Company, at Seraing, and MM. Blondiaux and Co., at Thy-le-Château, on account of the State Railways of Southern Russia, the construction of which is directed by the Baron de Sternberg. The Belgian firms have, it is stated, not hesitated to accept specifications of a very rigorous character, in respect to conditions of fabrication, resistance, and guarantee. Orders continue, upon the whole, to be scarce in Belgium, and English pig is offered at low rates, so that it would not be surprising to hear of the extinction of further blast-furnaces in the Charleroi district. The Monceau-sur-Sambre Blast-Furnaces Company will pay, Oct. 1, a first dividend of 1l. per 20l. share for the exercise 1867. Meetings are announced as follows:—Charleroi Iron Manufactory (Victor Gilleaux and Co.), Sept. 28, at Charleroi; Charbonnage du Bois, at Quaregnon, Oct. 3, at Quaregnon; Escarpelle Mines Company, Oct. 6, at Cambrai; La Haye Collieries Company, Oct. 8, at Liége; Val-Benoît Collieries, Oct. 14, at Liége: Vicoigne Mines, Oct. 28, at Valenciennes; and Sars-Longchamps and Bouvy Collieries, Oct. 31, at St. Vaast.

The tone of the Havre copper market has been more feeble; scarcely any purchasers of disposable Chilian in bars have presented themselves beyond 74l. 10s., and for delivery at the close of October at 75l. 2s. per ton. The Paris market has been quiet by continuation at former rates. Sales have been almost *nil* at Marseilles, and by consequence the prices previously indicated, although maintained, are regarded as nominal. There is nothing particular to mention with regard to the state of the German markets, on which the advance has, for the rest, been less decided. At Hamburg the article remains sustained at former rates, but purchasers refuse at the same time to accede to the pretensions of holders, the result being an almost complete inactivity in transactions. Very considerable animation has prevailed in the Dutch tin market, and the sales noted have been concluded at an advance. The sale for immediate delivery is mentioned at Rotterdam of 800 ingots of Banca at 54¼ fl., 1100 ingots of ditto at 54¾ fl., 2400 ingots of ditto at 55 fl., and 200 ingots of ditto at 55¼ fl. Of tin to be obtained from the approaching sales, 3500 ingots of Banca have found purchasers at 55 fl. to 55¾ fl.; various parcels of Billiton have been dealt in at 53 fl. to 53½ fl., besides 500 ingots, under sail, at secret rates. This activity is regarded as auguring favourably for the result of the public sale. The Paris and Marseilles markets have been firm at previous rates. Under the influence of the favourable advices from Holland and England, the article has maintained itself very well on the principal German markets; at the same time, large transactions remain in suspense for the present. At Paris, rough French lead has made 19l. 16s., and Spanish 20l. per ton. At Marseilles, lead in saumons, first fusion, has made 18l. 8s. to 18l. 10s.; ditto, second fusion, 18l. 2s.; ditto, shot, 20l.; ditto, rolled and in pipes, 21l. per ton. At Rotterdam, Stolberg and Eschweiler, and various German marks, have made 11¼ fl. The sale of the lead mines of Falset, in the province of Tarragona (Spain), not having taken place at biddings invited May 1, the Spanish Government has decided that a fresh sale shall be attempted Oct. 11. The tendency of the Hamburg zinc market has been, upon the whole, firm. The Breslau market has been quiet. At Paris, prices have remained without change, rough Silesian having made 21l. 16s., and zinc from other sources 21l. per ton.

MINING, METALS, AND MINERALS—PATENT MATTERS,

BY MICHAEL HENRY,

Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

Mr. GREENSHIELD'S invention, of a compound for producing illuminating gas, consists in mixing together resin, pitch oil, otherwise known as dead oil or heavy oil, paraffin oil or paraffin tar, and paraffin, in other forms petroleum, animal tar, with an alkali, being either potash, soda, or lime, or any other alkali earth or metallic oxide capable of saponifying and making a soluble or insoluble compound, as required. The substances to be saponified are boiled together with an alkali, and after being completely commingled the resulting liquid is allowed to cool, when in a short time it will be solidified, and is easily formed into blocks or lumps of any convenient form or size, which are particularly applicable for storage and shipment; or the substances can be boiled for a shorter time, so as to leave it either in a soft, plastic, soluble, or liquid state.

Mr. E. STEVENS has patented a mode of securing coal-plates, trap-doors, and other like articles. The invention has for its object improvements in means or apparatus employed to secure coal-plates, trap-doors, and other similar articles. For this purpose a fixed ear-key or bolt, and a sliding bolt, are employed; the sliding bolt is guided in suitable guides; cast on or affixed to the article to be screwed on this sliding bolt one or more big pins or teeth are formed or fixed, which are acted upon by a weighted lever, or by a lever acted upon by a spring.

Among the curiosities of the Patent Office is an ingenious contrivance recently patented by J. PARKES, for an apparatus for giving answers to selected questions, in which a mechanical appliance is used for depositing in a drawer, or receptacle, appropriate answers to questions selected and submitted for solution to the instrument, which the patentee aptly calls the scientific oracle. The articles so deposited are discs, bearing mottos or devices. A sort of inclined race, or guideway, formed of bars hinged to brackets, one bar carrying a series of plates or buckets, which close a graduated space left between the bars. The questions and answers are set on the face of a graduated disc.

Messrs. WESTWOOD and BAILLIE, names well known in connection with the art of iron shipbuilding, have lately specified a patent for protecting the outer surface, or external parts, of iron ships from corrosion or vegetable matter, which consists in applying asphalte or other substance, or composition, in the following manner:—Flat bars of wood, or iron, are fixed to the outside of the ship at convenient intervals; the outer surfaces are then covered with black varnish, and the bars are covered with a wood sheathing, whereby a space is left between the sheathing and the surface of the ship, which forms a cell, into which is poured asphalte, Portland cement, Roman cement, or composition made of pitch or bituminous substance, with or without earthy matter. The wood sheathing may be coated with copper, the bituminous substance interposed between the two metals preventing galvanic action.

DIAMONDS IN NORTH AMERICA.—At the present time Brazil furnishes a large proportion of the diamonds of commerce, the celebrated mines of Golconda being so nearly exhausted as to rent for a few dollars a year. Other localities in India are, however, rather more prolific. In the United States they have been obtained in Rutherford county, North Carolina, and in Hall county, Georgia, and very recently quite a number have been found in California, principally in El Dorado and Amador counties.

Mining Correspondence.

BRITISH MINES.

BEDOL-AUR.—H. R. Harvey, Sept. 26: We cut a level in the cross-cut to-day, and from the nature of the ground I should think we were near the lode. The stope in the shaft below the 77 fathom level is looking much better, now yielding nearly 10 cwts. of lead ore per fathom. Jones's pitch is looking poor at present, but we expect an improvement soon.

BLACK CRAIG.—J. Smitham, Sept. 26: We are continuing to make fair progress in sinking Harriet's shaft below the 54 fm. level. The stopes in the back of the 34 fm. level east are producing from 6 to 7 cwts. of lead per fathom. The lead stopes in the back of the 54 fm. level, west of Harriet's cross-cut, are producing 20 cwts. per fathom. The stopes west of rise are producing from 12 to 15 cwts. of lead per fathom. The stopes in the back of the 54 fm. level, east of No. 2 cross-cut, are producing from 7 to 8 cwts. of lead per fathom. We have 20 tons of lead weighed into the house.

BOTTLE HILL.—Joseph Eddy, Sept. 26: The ground in the north cross-cut still continues easy for working, and, judging from its appearance, we are very near the lode. The ground is also easy on the south lode; this lode is now about 2¼ ft. wide, but producing nothing to value. We have commenced burning our tin for the sampling, and no time shall be lost in preparing it for market.

BRONFLOYD UNITED.—T. Kemp, Sept. 25: We have temporarily suspended the cross-cut at the 63, and the men are driving west in a good lode, worth 2½ tons of lead per cubic fathom, the object being to get under the point of winze, which is 8 fm. 3 ft. under the 52, and thus effect a communication between these two levels; when made our operations will be greatly facilitated, and our returns of ore increased. The stopes under the 52 are now worth 30 cwts. of lead per fm., and I cannot look for any improvement in them, having passed over the richest part of the lode. The stopes above the 52 are without change. The collar of the old engine-shaft is in a bad state, owing to the timber having decayed, and must be replaced with new. The bob-pit walls must also be rebuilt, and this work should be done immediately, before the wet season sets in.

BUDNICK CONSOLS.—James Evans: We have done nothing on the parallel lode this week, as the tributers are stamping and cleaning up the tin raised within the last month, but next week I hope to be able to send you a good report.

CAPE CORNWALL.—R. Pryor, W. White, Sept. 25: The lode in the 100, east of shaft, is just the same as when last reported on—a kindly lode. The lode in the rise and stopes in back of the 90 is worth 4l. per fathom. The lode in the 70 end west continues to yield good stones of copper ore, with every indication of a further improvement.

CARADON CONSOLS.—S. Bennetts, Sept. 24: The lode in the 68 west is again slightly improved; it is from 3 ft. to 3½ ft. wide, and worth fully 15l. per fathom. The shaft below this level progresses favourably, and the ground is good. The driving of the 58 west will be resumed on Monday next.

CARDIGANSHIRE LEAD.—E. Pearse, Sept. 26: Glan Rheidol Mine: The lode in the 40 fm. level, west of engine-shaft, will yield 25 cwts. of lead ore per fathom for the part of the lode carried. The lode in the 30 west has improved since my last report, now producing saving work. The lode in the winze sinking below the 30 fm. level still continues to look well, worth 30 cwts. of lead ore per fathom. The above are all the bargains working at present, the others being full of stuff. The new drawing-wheel is erected, and is being painted today, and will be ready for work on Monday next, and we shall lose no time in clearing the stuff out of the mine, and resume working the different bargains.

CRELAKE.—William Skewis, William Hooper, Sept. 25: The lode in the 74 west is 2 feet wide, composed of mundic and copper ore, worth 5l. per fathom. The lode in the rise in the back of the 62 west is 2 feet wide, worth 7l. per fathom; and in the stope in the back of this level it is 2½ feet wide, worth 9l. per fathom. The lode in the 50 west is 2½ feet wide, containing mundic, spar, and copper ore, worth 10l. per fathom. The lode in No. 1 stope, in the back of this level, is 3 feet wide, worth 7l. per fathom. In the new, or No. 2 stope, in the back of this level, the lode is 4 feet wide, worth 11l. per fathom. The lode in the winze sinking below this level is 2 feet wide, composed of mundic, spar, and copper ore—good saving work. The lode in the 40 west is 2¼ feet wide, composed of mundic, capel, and copper ore, worth 3l. per fathom. The lode in the stope in the back of this level is 3 feet wide, worth 15l. per fathom. The lode in the 28, east from Dart's, or western rise, is 2 feet wide, worth 6l per fathom. The lode in the 28 west is 2 feet wide, worth 5l. per fathom; this end is expected to be communicated with Dart's end in the course of this week. We have sold this week a 60-ton parcel of low price ore, and shall be in a position to sell another 200 tons of mundic by the end of next week.

CUDDRA.—F. Puckey, A. Cundy, Sept. 24: In the 124, west of Walker's shaft, we are still driving by the side of the lode, and the ground favourable for progress. In the 130, west of Walker's shaft, we are also driving by the side of the lode. In cutting out the lode behind the end, in the 130, the tin part is 4 feet wide, and worth 16l. per fathom. In the stope in the back of the 130 the lode is 12 feet wide, and worth 25l. per fathom for that width. There is no change to notice in the 117 fathom level cross-cut driving north. During the past fortnight we have been driving and stoping in the 100, west of Walker's shaft, in order to lengthen the stope and prove the tin ground to the west. The lode in the western end is from 8 to 9 feet wide, and worth 15l. per fathom for that width. The lode in the stope in the back of the 100 is, on the south part, rather disordered, being mixed up with killas and branches, the latter containing tin; the whole together, which is 15 feet wide, is worth 35l. per fathom. In the 85 we have commenced to cross-cut the lode, and are now driving through the south capels, not having yet reached the main part of the lode.

EAST NEPTUNE.—P. Floyd, Sept. 26: In the 25 fm. level cross-cut, north of Hosking's shaft, we have cut through the lode, and find it to be 12 feet wide, composed of prian and fluor-spar, and presents the same good indications as reported in my last, producing rich grey and yellow copper ore. We have now commenced to drive east, on the prian part, and shall in the course of a week take down the lode, and will send you the result in next report. In the 25 fm. level, driving east of Hosking's shaft, on south lode, the lode is 2 feet wide, producing good stones of copper ore, and of a most promising appearance to improve; by extending this end about 10 fathoms further east it will form a junction with the Old Wheal Neptune lode, when we expect a great change for the better. By the end of next week we expect to communicate the 25, driving west with old engine-shaft, and shall at once resume the sinking of Hosking's shaft.

EAST PROVIDENCE.—J. Nancarrow, W. White, Sept. 25: There is no alteration in Boorman's shaft; it will be down to the 106 fm. level about the end of this month. The lode in the 94 east is small. In the 82 east we have put the men to drive north to get under the Carbona. There is a pitch in this level, which looks pretty well. The Carbona below the 70 is worth 6l. per fathom. The lode in the 70 east is small. At the 60 we are driving north on the cross-course, which yields a little tin. The 50 east is opening tribute ground. The tribute pitches are looking just as usual.

EAST ROSEWARNE.—Charles Glasson, Sept. 26: King's shaft is down to the 105; the lode in the bottom of the shaft is 15 in. wide, worth 7l. per fathom. I have set the shaftmen to drive east and west of this level: in the east end the lode is 15 in. wide, worth 4l. per fathom; in the west end the lode is 18 in. wide, producing stones of copper ore, but not enough to value. In the 95, west of King's shaft, we have driven through the elvan course; the lode is 8 in. wide, worth 4l. per fathom. In the 95, east of King's shaft, the lode is 8 in. wide, worth 5l. per fathom. In the 85, west of King's shaft, the lode is 10 in. wide, worth 6l. per fathom. The lode in the rise in back of this level is 12 in. wide, worth 7l. per fathom.

EAST SNAEFELL.—W. H. Rowe, Sept. 25: There is still a very promising and valuable lode in the 15 end. We have already gone through 3¼ fathoms of ground, worth on an average about ½ ton per fm., but much better than that about three yards back from the present forehead. I will assay the ore for silver in a few days, and will let you know its exact value. No change of importance as yet at the new shaft.

EAST ST. JUST UNITED.—R. Pryor, R. P. Goldsworthy, R. Wearne, Sept. 25: Eastern Mine: At Phillips's engine-shaft, sinking below the 30, the lode is without change. The lode (Agaworth) in the 20, east from the guide, is very promising, producing good stones of tin, and letting out water freely.—Western Mine, Saveall's Lode: The lode in the engine-shaft, sinking below the 90, is worth 12l. per fathom. The lode in the 90 west is worth 7l. per fathom. The lode in the stopes in the back west is worth 9l. per fathom. The lode in the 90 end east is worth 10l. per fathom. The lode in the stopes in back of this level is worth 10l. per fathom. The lode in the 76 end west is without change. This remark will also apply to the winze sinking below this level. The lode in the 76 stope west is worth 5l. per fathom.—Buck Lode: The lode in the 62 east is without change. The lode in the 40 east is producing good stones of tin, and is promising for further improvement.—Owl Lode: The 40, north from Reddipper shaft, is producing good stones of tin. The 20, south from Saveall's, is without change. The lode in the winze sinking below the 20, from West Buck shaft, is worth 5l. per fathom. The lode in the 10, north from West Buck shaft, is without change. In the winze sinking below the 10, on the branch, it is worth 6l. per fm. The adit, north from West Buck shaft, is producing stones of tin.—Reddipper Lode: The 20 east is without change.—North Lode: The 40 east is producing stamping-work. The lode in the 20 east is opening tribute ground.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Sept. 25: We have commenced driving both the ends at the 110 fm. level. In the 110 west the lode is 20 in. wide, of flookan, quartz, &c., with good black and grey ore, having a most promising appearance—in fact, looking a great deal better than it did at the 95 fm. level for a bunch of ore. We have set this end to drive at 60s. per fm. There is no change in the 110 east. The lode in the 95 fm. level east is 2½ feet wide, yielding ore and tin, of the former 1½ ton per fm., together worth 10l. per fm. The lode in the rise above this level is 2 ft. wide, and worth for ore and tin 6l. per fm. The lode in the 95 fm. level west has considerably improved since last week. To-day there is a branch of black and grey ore in the end, 6 or 7 in. wide, worth fully 1 ton per fm.; and from the features this lode is presenting we have every reason to expect a still greater improvement. The stope above this level will produce 1½ ton of copper ore per fm.

EAST WHEAL LOVELL.—R. Quentrall, Sept. 25: The mine continues to open out very well; there is no falling off throughout.—North Lode: Below the 40 the men are stoping east of the shaft, in a lode worth from 10l. to 20l. per fathom. In the back of this level east the lode is worth from 25l. to 30l. per fm., and west from 15l. to 20l. per fathom.—South Lode: In the back of the 40 there are two stopes, each worth as last reported—30l. per fathom; and in the winze sinking below the 40 the lode is worth 90l. per fathom.

EAST WHEAL RUSSELL.—Wm. Richards, Sept. 20: We have cut into the lode in the 88 fm. level cross-cut 3 ft., but it is not yet through it; the part exposed is worth 20l. per fm. We have not cut the north lode in the 130 cross-cut.

— W. Richards, Sept. 23: The lode in the 83 is of the same value. Water issues very strongly from the extreme point of the 130 fm. level cross-cut; the north lode is still before us.

— W. Richards, Sept. 24: I have just now come up from underground; the north lode is not yet intersected in the 130 fm. level cross-cut; in my opinion the ground in the present end is a mixture of elvan and killas. The lode is not cut through in the 88; the part passed through is worth 20l. per fm. Full particulars of the prospects of the mine you may expect by to-morrow's post.

— W. Richards, Sept. 25: The part of the lode now being cut into in the 130 cross-cut contains iron, quartz, a little red oxide, and native copper; it is very vughy, wet, and slow for progress at the present time. The ground in the 140 cross-cut south is favourable for progress. The ground inside the branch passed through in the 130 cross-cut, east of the slide, is a mixture of killas and elvan, and strongly mineralised; water issues as strongly as before from the extreme point; we have about 16 feet more to drive, according to the dialling, to intersect the north lode. The ground in the 120 cross-cut is stiff at the present time, but it will improve as we advance towards the lode. We have cut into the north lode in the 88 cross-cut 3½ feet, but not yet through it; the part now exposed contains fine gossan, prian, quartz, green carbonate of copper, &c., a very promising part; we shall continue the cross-cut to the north wall before we turn to drive east and west on the ore-bearing part. The prospects of the mine are becoming much more cheering. The tribute pitches are a little improved.

EBURY.—John Kitto, Sept. 24: The main shaft is now down 4½ fms. below the 40, and the sinking, which is being continued by six men, is progressing at the rate of about 2 fms. per month. The ground in the bottom at present is harder, and the lode smaller than usual; but this is only temporary, and will, undoubtedly, soon change for the better. In my opinion the shaft is going down through a hard bar of ground left by the former workers, as both east and west of it, as far as can be seen, appears to be worked away, and nothing but small arches are left standing. It is scarcely possible that this ground can have been worked much below the 40, as no machinery has ever been brought to bear upon it, and there is every reason to believe, from the large proportion of ground taken away, that immense quantities of ore have been raised, and that as soon as we get into new ground we shall find it equally productive. Some men have lately been engaged on tribute, working out the small arches that remain above the 40, and have raised a fair quantity of ore. As soon as we get the shaft down for a new level, and drive out into whole ground, I have no doubt whatever of opening up at once some good stopes or tribute ground, and be in a position to make regular returns of ore. There can be no doubt of this lode being identical with that on which operations are now being successfully carried on in the Westminster Mine, which adjoins it, and the prospects in every respect warrant the belief that it will, on development, prove to be equally productive; and, as but little machinery will be required, it can scarcely fail to become a lasting and profitable mine.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., Sept. 21: In the 70 cross-cut, north from engine-shaft, we have intersected the south capels of the lode, and cut into it about 2 ft., from which the water is flowing sufficiently strong to drain the 60 fm. level (above), where we purpose to commence a new wiuze in a good course of ore, and communicate with the 70 fm. level at our earliest possible convenience. The lode in the 60 fm. level east is looking well, improving in character, and worth 2 tons of good quality ore per fathom. The lode in the stopes in the back of this level is worth 3 tons of ore per fathom. The lode in the winze sinking below the 50 fm. level, east of Moore's cross-cut, is worth 8 tons of ore per fathom. The lode in the rise in the back of the 50 fm. level from old sump is worth 4 tons of ore per fathom. The lode in the stopes in the back of the 50 fm. level is worth from 8 to 10 tons of ore per fathom. We are exceedingly busy in preparing for our next sampling, which we calculate will be upwards of 300 tons of copper ore, and nearly 100 tons of sulphur mundic.

GREAT MONA.—J. Trewin, Sept. 6: The fixing of the lift, rods, cistern, &c., is now completed, and the balance-limb connected to the water-wheel, and I am glad to say everything is strong, and works remarkably well. The shaftmen have resumed the sinking of the engine-shaft, which is being pushed with speed.

— J. Trewin, Sept. 18: The lode in the engine-shaft continues to improve, and is producing good stones of lead and copper ore intermixed; it looks exceedingly promising, and is likely soon to lead to good results. Since the completion of the changing of the pitwork, fixing of the balance-limb, &c., the sinking has been pushed on with all speed, and I am glad to state that the machinery does its work as well as when it was first put down.

GREAT NORTH DOWNS.—Wm. Rich C. Bawden, Sept. 23: The lode in Sleggan's shaft is much the same as when last reported on—worth 30l. per fm. for the length of shaft. The 86 east carries good stones of ore. The 86 end west is worth 10l. per fathom. The stopes in the back of this level are improved since our report of last week. The 70 end west is worth 6l. per fathom. The stopes in the back of this level are worth 12l. per fathom. The lode in the 60, east of Butler's, is large and promising. The 70 fm. level, west of this shaft is worth 10l. per fathom.

GREAT RETALLACK.—G. R. Odgers, John Harris, Sept. 25: No. 1 Lode: We have not yet met with the main part of the lode, but it cannot be far distant. The water is increasing, and as the cross-cut has completely drained the North Retallack shaft, nearly 50 fathoms distant, we look upon this as a very favourable feature. The north and south ends, on the branch first intersected, are each worth fully 8 cwts. of silver-lead to the fathom.—No. 2 Lode: The men are making good progress with the sinking. In the 20 north the lode is producing excellent work for lead, and we are confident that a bunch of lead is near at hand. The rise is communicated with the winze, and the men are now stoping on a lode worth 10 cwts. of lead to the fathom. The 20 south is looking more promising, where we are daily expecting an improvement. The stopes above this level are worth 8 cwts. of lead to the fathom. We have commenced a winze below the 10 north, where there is a lode worth 10 cwts. of lead per fathom. The mine is looking better than when we last reported, and we hope in our next report to announce some important improvement.

GREAT SOUTH TOLGUS.—John Daw, Sept. 25: In the 140, east of Noel's shaft, the lode is still producing 4 tons of ore per fathom. In the 140, west of Noel's shaft, the lode is 1½ ft. wide, producing 2 tons of ore, or worth 8l., per fathom. At this time the machinery is working well, and the water is between four and five strokes per minute. We sampled to-day 156 tons of copper ore; this has been raised during the past six weeks. The tin pitches are producing large quantities of good quality tinstuff.

GREAT WHEAL BADDERN.—R. Pryor, H. Tregoning, Sept. 21: We have to-day set the following bargains:—The 75 fm. level cross-cut, south of Hill Brothers engine-shaft, to drive by six men, at 15l. per fathom; the ground has improved for driving the last few days, and an increased quantity of water coming from the end, which is still in the elvan, but we believe we shall soon get through the same. The end to drive west on the Baddern lode by six men, at 8l. per fathom; the ground at present in this end is strongly mineralised, and the lode 2 ft. wide, containing lead, flookan, mundic, and soft spar, and promising for a further improvement; water coming freely from the lode. The pay and setting went off satisfactorily.

HARWOOD.—J. Race, Sept. 21: There is no change of importance; the beds are dipping fast, and I expect we are close upon cutting a vein in the level. The stopes are all about as last reported. The level opening out to Trough is through the run and broken ground; there is limestone now on both sides, and I hope we shall soon be up to the other veins. Two men will begin to drive in Green Band level, having got the rails laid. We have 13 tons of ore nearly ready.

HINGSTON DOWN CONSOLS.—T. Richards, Sept. 25: The 140 fathom level, east of Bailey's engine-shaft, continues worth 35l. per fathom. The stope in the bottom of the 130 east, and east of the cross-course, is worth 40l. per fathom. The stope in the back of the 130 east is worth 25l. per fathom. The stope in the back of the 130 west is worth 18l. per fathom. The stopes in the back and bottom of the 120 east are worth 20l. per fathom. The stope in the back of the 120 west is worth 20l. per fathom.

LEEDS AND ST. AUBYN.—John Curtis, Sept. 26: Setting Report, Sept. 21: The 40 to drive east of Harvey's shaft by four men, at 40s. per fm.; lode 3 ft. wide, worth 7l. per fm. The 40 to drive west of Harvey's shaft by four men, at 40s. per fm.; lode 2½ ft. wide, worth 6l. 10s. per fm. We have four men stoping the back of this level, east and west of shaft, at 12s. per fm.; lode worth 7l. per fathom. The 30 to drive east of Harvey's shaft by four men, at 24. 10s. per fm.; lode 3 ft. wide, opening out tribute ground of 8s. in 1l. The 30 to drive west of Harvey's by four men, at 45s. per fm.; lode 3½ ft. wide, and in 4 fms. further driving will be under Grace's shaft; when holed to the shaft the back of this level will be wrought by tributers, at 8s. in 1l. Grace's shaft to sink below the 20 by four men, at 25s. per fm., and 10s. tribute, and have 4 fms. further to sink to hole to the 30. The adit cross-cut to drive south of the standard lode to Curtis's shaft by three men and two boys, at 30s. per fm. The rise in the back of the 10, east of Vivian's shaft, on Paull's lode, by two men, at 55s. per fm.; no lode has been taken down for the last 4 fms. in rising. The adit level to drive east of Vivian's shaft by one man and one boy, at 50s. per fm.; lode worth 2l. per fm. We have 20 men on tribute, varying from 8s. to 13s. 4d. in 1l. Tin sold, Aug. 20, 8 tons 18 cwts. 3 qrs. 28 lbs., price 55l. 7s. 6d., amount 495l. 9s.

MARKE VALLEY.—J. Truscott, Sept. 24: Marke's Lode: The 112 east is producing 3½ tons of copper ore per fm. The 112 west is producing 1 ton of copper ore per fm. In the 100 west the lode is poor.—Rosedown Lode: The 90 west is producing 1 ton per fm. The 80 west is producing 1 ton per fm. The 70 west is producing 2 tons per fm. The 60 west is producing 2 tons per fm. The 50 west is producing 5 tons per fm. The 50 east is producing 3 tons per fathom. The cross-cut from the 100, on Marke's lode, has been driven north to and beyond the distance where we expected to intersect Rosedown lode, but in this drivage we have not met with it. The cross-cut has been suspended for a month, and the men during that ast month commenced sinking a winze below the 90, on this lode (which is underlying north very fast), but owing to the increase of water is suspended, consequently to drain this winze we shall extend the drivage east on Marke's lode, to see if we can unwater it.

MINERA UNION.—W. J. Harris, Sept. 26: Douglas Shaft: The lode in the 60 yard level north is 1½ foot wide, yielding good stones of lead. The pitch in the back of this level is worth 8 cwts. per fathom.—Brabner's Shaft: The lode in the bottom of the 80 south is worth 15 cwts. per fathom.—Williams's Shaft: The lode in the 40 north is easy for progress, and contains good stones of lead. The winze in the bottom of this level is 10 yards deep; the lode is 4 feet wide, yielding occasional stones of lead, and very promising. The pitch in this level is worth 12 cwts. per fathom. The new shaft is 15 yards in favourable ground.

NETHER HEARTH.—W. Vipond, Sept. 21: We have got the western stope taken up to the old shaft, and shall begin next week to secure this and clear out the old "deads." The small vein is poor and hard at the bottom of the limestone both east and west. We have begun to rise, and have better ore and easier ground going up. I send you a sample of 8 tons of ore nearly ready for sale.

NEW CROW HILL.—Wm. Trelease, Sept. 24: The 70, east of engine-shaft, has been driven 8 fms. 2 ft. 9 in. by the side of the lode. We have again cut through the lode, and find it to be 14 ft. wide—a mass of flookan, quartz, soft spar, mundic, and jack, with spots of lead ore; and, although of no value at present, I do not hesitate to say that it is a champion and a splendid looking lode. In my opinion we are not deep enough for the ore, which it will assuredly produce from deeper levels. The new winze below the 55 has been sunk 8 fms. through a lode from 3 to 5 ft. wide, composed of mundic, flookan, soft spar, jack, &c., and occasionally stones of lead ore. The ground stoped away in the old stopes, above the 35, is 24 fms., and the lode at present is worth 25l. per fm. The ground broken from the new stope (No. 2) adjoining at the west the last-named is 10 fms., and the lode at present worth about 5 cwts. per fm.—Wheal Louisa: The cross-cut here, in the 60, has been driven 8 fms. 3 ft., and about 5 fms. of this drivage was through lodey stuff, producing some good stones of ore. We have driven east on the south part 2½ fms., and west about 4 fms., fram which we have broken some fine stones of lead ore, more especially in the eastern end. The lode in the eastern end is 4 ft. wide, very kindly, and producing good stones of lead ore. The lode in the western end is 2½ ft. wide, composed of mundic, jack, &c., and lead ore. I have sent to the office some specimens of the ore from this lode, and in my judgment we ought to be preparing to sink to see this great lode at least 20 fms. deeper.

NEW WHEAL TOWAN.—R. Pryor, Sept. 25: No particular change has taken place during the past week. The lode in the adit level continues just the same as when last reported on.

NORTH DEVON.—J. Blamey, Sept. 25: The new shaft, on the Buzzacott estate, was commenced on the 12th inst., and is sunk 3½ fms.: at a depth of 12 fms. we expect to cut the lode about the latter end of November, which has produced some tons of silver-lead ore near the surface. The 40, which is being driven to cut the caunter lode, is very hard, and the progress is, consequently, slow, but we expect to reach the lode in six or seven weeks.

NORTH DOWNS.—F. Pryor, J. Grenfell, Sept. 24: Bennetts' Shaft: The 40 fathom level cross-cut to drive south of this shaft, to cut the south lode east of Bennetts' cross-course, to two men, at 2l. 15s. per fathom.—King's Shaft: The 60, to drive west of this shaft, to six men, at 6l. per fathom. A stope in the back of this level, 10 fms. behind the end, to six men, at 2l. 15s. per fathom, worth 6l. per fathom. The 50, to drive west of this shaft, to six men, at 4l. 10s. per fathom, worth 20l. per fathom. A stope in the back of this level, 4 fms. behind the end, to six men, at 2l. 5s. per fathom, worth 15l. per fathom. Also four tribute pitches to eight men and two boys, at from 12s. 6d. to 13s. 4d. in 1l. We sample to-day 91 tons (computed) of good quality ore.

NORTH DOWNS.—John Grenfell, Sept. 26: I am glad to inform you that the stope in the back of the 50 has further improved this week, some part of it being worth 30l. per fm. We have now driven through the ore ground in this level 6 fms., the average value for the whole drivage being from 16l. to 18l. per fathom; by which you will perceive, according to the ordinary mode of calculation (5 fms. up and 5 fms. down) we haoe discovered in this level in the last six weeks 1000l. worth of ore. The present end is fully as good as the average referred to above. No change to notice in any other part of the mine.

NORTH PHŒNIX.—J. Seccombe, J. Martin, Sept. 20: Setting Report: The 160 to drive west in the killas on the south side of the lode by six men, at 9l. per fathom; there is no particular change in the ground, which continues to be favourable. The 140 to drive west in the killas, on the south side of the lode, by six men, at 6l. per fathom; there is no change in the ground, excepting that there is more water issuing from it. To drive the No. 4 fm. level cross-cut into the lode from the 140 west, by four men, at 18l. per fathom; the portion of the lode at present in the cross-cut is composed of hard capel, the joints in which contain quartz and prian.

NORTH RETALLACK.—G. R. Odgers, Sept. 26: The 10 fm. level has been driven 7 to 8 fms., the lode producing lead for the entire distance, and there is a small branch of lead in the present end. The Great Retallock Mine has drained our shaft. We shall at once resume sinking.

NORTH SHEPHERDS.—H. Bennetts, Sept. 26: In the 50 west the lode looks more favourable, and shows signs of further improvement. The 40 fm. level rise is communicated to Rye's shaft, and has given good ventilation through the mine. In the 30 fm. level end, west of Rye's, the lode contains a little lead, but not to value. The 20 fm. level cross-cut is pushed on as fast as possible, and we expect to meet with the lode in a few days.

NORTH SUSAN (Marizion).—Elisha Harvey, Sept. 23: This mine is situated in the parish of Crowan, in one of the best mining districts in Cornwall. The sett is very extensive, being about ½ mile in length, and the same in width; there are four shafts sunk on the course of the lode, varying in depth from 10 to 16 fms., all of which have produced tin in paying quantities. At the deepest point the lode in the present end is about 3 ft. wide, and worth for tin full 20l. per fathom; this level has been driven through good tin ground for 75 fms., and a more splendid lode cannot be seen at so shallow a depth. I would recommend that the deep adit be continued west on the course of the south lode, to intersect the lode above named, which is a distance of 70 fms., and 20 fms. below the present bottom of the mine; this can, in my opinion, be accomplished for the sum of 140l., and give every chance of laying open a valuable mine. It is more than probable that tin will be met with in the adit referred to to pay the expense of driving. The mine can be worked for years without the aid of machinery, and leave good profits to the shareholders.

OLD GUNNISLAKE.—H. Rickard, Sept. 25: The new bob is up and in its place, and all other works to follow are progressing as fast as possible. Not a moment will be lost to set the engine to work, which I hope, if all things go on well, will be in a few days. I hope to hole the 48, east from Parker's, to the deep adit within the next week, as we can hear the borer turning in the hole from each party, and in the right direction.

PEDN-AN-DREA UNITED.—W. Tregay, J. Thomas, E. Creghan, Sept. 21: Sump: The lode in the 140 north is 3 ft. wide, worth 15l. per fathom; this lode has here a more regular and decided appearance than in either of the two levels above, and has taken a more regular and promising underlie—north 3 feet in a fathom, whereas both in the 120 and 130 fm. levels it was either perpendicular or inclining southwards; we now expect improvements in this lode. The 130 east end is worth 5l. per fathom. The 130 winze is worth 8l. per fathom. The 130 west end is worth 15l. per fathom. The stope in bottom of this level is worth 30l. per fathom, for 9 ft. wide. The stope in back of this level is worth 15l. per fathom, for 9 ft. wide. The 120 west is producing stones of tin, but we have only a small part of the lode here, the greater part of it still standing southwards. The 100 east rise is worth 6l. per fathom.—Cobler's: In the bottom of the 110 fm. level much of the lode is gone down behind the shaft, and this is being stoped away by tributers. We have not yet the footwall, but have opened on the lode 12 ft., which is worth for that breadth about 20l., or 10l. per cubic fathom. This part of the lode must be all standing north of the 120 fm. level west end, through which we shall have to cross-cut. The lode in the 110 east is worth 8l. per fm. The 110 west is worth 15l. per fathom, for 6 ft. wide, and no footwall. The men at the 90 north have been laid up from an accident, and there is no change to report for the week. The lode in the 90 west is worth 8l. per fathom.

PENHALLS.—S. Bennetts, W. Higgins, Sept. 20: Both the 60 ends are without any material change during the past fortnight. The 50 west on the new lode continues to produce some tinstuff, the lode large and of about the same value as last reported. The rises above this level are not quite so well. The water in the Pink Mine is now about midway in the 20 fm. level, where the progress in forking is consequently much slower than we hope to find it below this level.

PENHALE WHEAL VOR.—Wm. H. Martin, Sept. 23: In Sanford's shaft, sinking below the 84, the lode is 2½ ft. wide, composed of prian, peach, mundic, and stones of tin; as soon as the branch on the north side of the shaft forms a junction with the lode I anticipate an improvement.—Penhale Lode: The lode in the 74, west of Hollingsworth's shaft, is 6 in. wide, composed of mundic, prian, and tin. The lode in the 74 east is 1 ft. wide, composed of mundic, peach, quartz, and tin, but not sufficient to value.—South Lode: In the 38, east of Battle's shaft, the lode is 1 ft. wide, worth 8l. per fathom. In the stope in back of this level the lode is worth 4l. per futhom. The lode in the 26 fm. level east end is 1 ft. wide, composed of capels, spar, and occasional stones of tin. In the stope in the bottom of the 26 the lode is worth 5l. per fathom. In the stope in back of the 26 the lode is worth 6l. per ;athom. The lode in the 26 west is 9 in. wide, yielding tinny work for the stamps. All the machinery is working well.

PRINCE OF WALES.—J. Gifford, W. Gifford, Sept. 23: In the 55 cross-cut north we have cut another small branch 2 in. wide, composed of spar; the ground is very favourable for driving, and still letting out much water. The two stopes in back of the 55 east are worth 25l. per fm. each. Watson's shaft is progressing favourably. There is no alteration to notice in any other part of the mine.

PROSPER UNITED.—J. Nicholls, Sept. 26: The lode in the 100 is 3 ft. wide, containing stones of tin and copper, but not sufficient to value. The lode in the 90 west is small and poor. The stopes in the back of this level are worth 12l. per fm. The 80 west is producing saving work for copper and tin. The stopes in the back of this level are worth 8l. per fm. The 70 east, on Gwallon lode, is looking promising, and yielding some good stones of ore. The 70 stopes are worth 7l. per fm. The 60 east, on Gwallon lode, is producing 1¼ ton or ore per fm. The stopes in the back of this level are worth 8l. per fm. The 50 east, on Gwallion lode, is poor. The stopes in the back are worth 6l. per fathom. The winze in the bottom is worth 7l. per fathom. The lode in the 40 east contains a little ore, but not enough to value. The winze in the bottom is producing 1 ton of ore per fm. The 50 west, on cross-cut lode, is producing saving work. The 50 east, on cross-cut lode, is worth 6l. per fm. The stope in the back is worth 8l. per fm,, and the winze in the bottom 9l. per fm. The pitches are not quite so good as they were some time ago. All the machinery is in good order.

REDMOOR.—T. Taylor, Sept. 26: There is no particular change in the south cross-cut; the ground is good for driving, now being set at 6l. per fm., and letting out water freely. In the north cross-cut we have a deal of capel, which is producing good stones of tin, and spots of copper. We shall save the stuff, and pick it for tinstuff; I think it will lead to a lode.

RHEIDOL.—Sept. 21: Rhurruggus: In the 12 fm. level west the lode is 4 feet wide, of a strong mixture of blende. No. 1 stope, west of No. 2 winze, will yield 3 tons of blende per fathom. No. 2 stope east will yield 2 tons of blende per fathom, and a strong mixture of lead ore. In Forpath level west the lode is 5 ft. wide, of slate, spar, and 2 ft. of gossan; the ground is very easy for driving.

ROSE AND CHIVERTON.—J. Evans, Sept. 25: In the adit level, driving south on No. 2 parallel lode, the lode is 5 feet wide, and of a very congenial character for lead; its appearances plainly show nothing is wanted but depth to realise. Last we intersected another caunter lode, composed of flookan, prian, and mundic, and it was in and about the caunters and east and west lodes the old mine made her great riches, and having proved that the same influences are bearing on the parallel lodes we have reason to expect similar results.

ROSECLIFF AND TOLCARNE.—R. Pryor, J. Phillips, Sept. 25: The ground in the 50 cross-cut, driving north of Lind's engine-shaft, is a little harder than usual, but we think it is only temporary. In the 30, driving south on the cross-course, west of the great flookan, we have not as yet intersected the lode. The lode in the stopes in the back of this level, east of cross-cut, is still worth 3l. per fathom for blende and lead.

ROSEWARNE CONSOLS.—J. Nancarrow, R. Knuckey, Sept. 24: The lode in the 70, west of sump, is improved, and is getting into the same character lode as that in the boundary shaft at Wheal Unity, where the rich ore was raised previous to the suspension of the workings; there the ore is rich in quality, and there is now every prospect of our going on to open up valuable ore ground. There is not much alteration in the 80 west, as the men have been engaged in getting in air pipes, &c., but the driving will now be prosecuted as fast as possible. The tin pitches present just the same appearance as at the setting. We have sampled to-day 16 tons of good copper ore. The stope at Ellen's is worth 10l. per fm.

SORTRIDGE CONSOLS.—R. Jackson, Sept. 26: In the 140 fathom level cross-cut, north of engine-shaft, no lode has been met with this week; the water still issues very strongly from the end. In the 140 fathom, level driving west of the north cross-cut, on the south part of the main lode, the lode is 1½ ft. wide, yielding good stones of coated copper ore, and looking promising for further improvement. There is no change to notice in any other part of the mine.

SOUTH CONDURROW.—J. Vivian and Son, W. Williams, Sept. 21: In King's shaft sinking under the 71, now down 2½ fms., the lode is 3 ft. wide, composed of flookan, mixed with quartz and iron. In the 71 west the lode is 2 feet wide, composed principally of flookan and iron, and carrying a little native copper. In the 61 east the lode is composed of quartz, flookan, and iron. In the 61 north on the cross-course, east of King's shaft, we are passing through a channel of rock having the character of horn-blende, which is letting out more water than we have had before in the cross-cut, and contains more native copper than we are accustomed to find, even in the lode. In the 61 west the part of the lode through which we have been driving is hard, but traversed by numerous fissures which let out a large quantity of water, so much so that this level is thoroughly draining the copper ore ground in the back of the 51 fm. level, and the upper ground generally westward. Fancying that there may be more lode standing to the south which may be of a more favourable character, or that we may meet better ground for progress on that side of the lode; we have to-day set the men to drive south. In the 51 east the lode is 1 ft. wide, and producing a little black copper ore, which is the first we have seen east of the cross-course, and is, therefore, encouraging. In the 51 west the lode is 3 ft. wide, producing a little copper ore, and presenting an exceedingly favourable appearance for an increased production of copper. The stopes in the back of the 51 west have improved; the western one is producing at present copper ore worth 25l. per fathom. In the winze sinking under the 40 west, now down 6 fms. 4 ft. 6 in., the lode is looking more favourable for copper than it has done. In the 30, west of Vivian's shaft, the lode is 2 ft. wide, containing prian and quartz, mixed with killas. Old Tin: shaft has been sunk 42 fms. under the 20, leaving 8 fms. more to reach the point which we hope to complete in a month.

SOUTH DARREN.—J. Boundy, Sept. 21: We are getting on very well in repairing the air-shaft; I hope to put it all right again from the 20 to the 40 level by Tuesday next. We shall at once commence putting in tramroad in the 60, clear out the stuff from the shaft, and I hope by the end of next week to commence drawing ore-stuff. We shall use every effort to do so. There is no change to report on this week in any of our underground operations.

SOUTH HERODSFOOT.—Wm. Goldsworthy, Sept. 26: The lode in the 86, north of the slide, is 1 ft. wide, composed of spar, flookan, and spots of lead occasionally. In the 86 south we have met with a hard bar of ground; and, therefore, the lode is not so large as it was, but we hope as soon as we get through it to have an improvement.

SOUTH WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Sept. 21: The engine-shaft is now sunk to the 30 below adit, and we shall immediately commence driving both east and west; in the former level we are expecting to meet with copper ore. There is no other change since our last advice.

ST. IVES WHEAL ALLEN.—J. Daniel, Sept. 26: The 40, east of Giesler's shaft, on the Carbona lode, is worth 8*l.* per fm. The 12, east of Richards's shaft yields tin to save; lode 3 ft. wide, and looks likely soon to become more valuable.

TREWEATHA.—Thos. Foote, J. Scoble, Sept. 25: The 50 south is still in disordered ground; we have cut more water in the end, and hope to soon intersect the lode. We have completed laying down the tramroad in this level north, and commenced driving the end; the lode is 2 feet wide, producing a little lead, but not to value. The lode in the 40 north is 3 feet wide, worth 6 cwts. of lead per fathom. The lode in the 30 north is 2½ ft. wide, producing 5 cwts. of lead per fathom. The stopes in this part of the mine are yielding the usual quantity of lead.—South Mine: The ground in the 63 fm. level cross-cut west is not at present quite so easy for progress, still we are making good progress in driving. We have communicated the rise in the back of the 50 on the eastern lode, with Harris's shaft, and we are pleased to say that we have holed very satisfactorily, and are still pushing on this work, so as to make the shaft complete to the 50 fm. level. The tribute pitches in this part of the mine are much the same as for some time past. We sampled on Friday last, the 20 inst., two parcels of lead, computed to weigh 61¼ tons. Tenders to be in on the 26th inst. From the assay we may expect to get a good price for the ore.

TYNE HEAD.—G. Millican, Sept. 21: We have cut through a small north and south string or branch this week, containing sulphur, No other change to notice. Enclosed I send the pay bill to Aug. 21.

VIGRA AND CLOGAU.—W. J. Holman, Sept. 26: The drivage west from No. 5 sink is opening out a fine piece of the lode, now 4 feet wide, and still enlarging; it has yielded visible gold during the week, and good stamps ore; the drivage east has somewhat improved. The stope west from No. 4 shaft has also yielded gold and good stamps work. The No. 3 stope produces good stamps ore, as also the No. 1 stope east, under No. 1 level. At No. 1 mine the east and west stopes are progressing favourably. The branch in the Vigra adit has not proved to be of any importance. The works at Old Clogau Copper Mine are proceeding as usual. Gold received since last report 24 ozs. 11 dwts.

WESTMINSTER.—F. Evans, Sept 25: There is nothing new to report since mine of the 18th inst., except that the 80 east is gradually improving for lead now worth from 12 to 15 cwts. per fm. As I have already explained, Thompson's shaft has fallen off in value, owing to our getting into a large quantity of clay, which is at times in the limestone; the lode will, doubtless, resume its former value shortly. I should state that the 80 west is worth from 12 to 15 cwts. per fm. The 70 east will produce 25 cwts. per fm., but the ground is hard for driving. The main rod of the old engine broke about the 40 fm. level, but it is again repaired; and a nut from one of the valves at Thompson's engine caused a stoppage of some hours, which raised the water to the 60. The two engines are now working, and it is hoped that the water will soon be out; but these breakages hinder us from breaking lead, and we must sample 50 tons next week, or defer it for a week, except you wish it otherwise.—Eastern Mine: There is a very promising lode at the shaft sinking below the 40; and I have no doubt as we get down we shall open good paying lead ground. Edward Watkin and Co. are engaged cutting a drain, &c., and putting in pipes to carry the surface water to the swallow. The deep level at Halkyn, 120 fathoms deep, is letting down an immense body of water, and will drain the whole country.

WEST BASSET.—G. Lightly, Sept. 24: Grenville's Shaft: The 154 is driven 25 fathoms east of the cross-cut from the shaft; at this point the lode has been cut into, and proves to be of the same size and value as when last taken down. The level is re-set to six men, to drive east, at 9*l.* per fathom. The same level is driven 30 fathoms west of the cross-cut; for the last 9 fathoms the lode has averaged 3 feet in width, and has occasionally produced a small a small quantity of ore, and although at present unproductive is of a very promising appearance; set to four men, at 4*l.* per fathom. The 144 is driven 63 fathoms east of the cross-cut from shaft, the lode being from 2 to 3 feet wide, and yielding 3 tons of good ore per fathom. During the past month ore to the value of 60*l.* has been broken at this point; set to six men, at 5*l.* per fathom. The driving of the 134 west is for the present suspended, and a winze is being sunk to communicate with the 154; set to four men, at 5*l.* per fathom. A winze is being sunk in the bottom of the 134, east of Percy's shaft, by six men, at 3*l.* 10s. per fathom, to communicate with the 144, driving west of Grenville's shaft; in the said winze the lode is 18 in. wide, containing stones of ore, and likely to become more productive. Grenville's engine-shaft, now down 4 fms. 4 ft. 6 in. under the 154, is set to 12 men, to sink at 50*l.* per fathom.—Thomas's Shaft—Middle Lode: The 75 is driven 5 fathoms east of Sweet's winze, or 22 fathoms east of the cross-cut; the lode in this level was for a long time small and unproductive, but it has recently improved both in size and value, being now 3 feet wide, yielding 2 tons of ore per fathom; set to six men, at 6*l.* per fathom. The 65, on the north part, is driven 49 fathoms east of the cross-cut; the lode is 18 inches wide, containing stones of ore; set to four men, at 8*l.* 10s. per fathom. The driving of the 65, on the south part, east of Spargo's winze, is stopped, and the men are placed to take down a part of the lode standing south of the level, 4 feet in width, all saving work for tin; set to four men, at 4*l.* 10s. per fathom. The 65 is driven 4½ fms. east of the eastern cross-course; the lode is about 1 ft. wide, and still disordered by the cross-course—set to four men, at 6*l.* per fm. In the same level, west of cross-course, the lode is 2 ft. wide, saving work for tin; set to four men, at 7*l.* 10s. per fm. In Spargo's winze, in bottom of the 52, east of the cross-cut, and down 6¼ fms., the lode is 3 feet wide, yielding fair quality tinstuff, and opening up tribute ground: set to four men, at 4*l.* 10s. per fm. In Phillips's winze, in bottom of the 52, west of the cross-cut, the lode is 1 foot wide, containing stones of ore; set by two men, at 5*l.* per fathom. In the 52 west, on the south lode, the lode is 18 in. wide, at present unproductive; set to two men, at 4*l.* 10s. per fm. Taking into consideration the valuable ore ground now being opened up in the 144, west of Grenville's shaft, the improvement in the 75 east, on the middle lode, and the continued productiveness of the tin ground, our position during the past two months may be said to have improved, and our prospects to be satisfactory.

WEST CARADON.—W. Johns, N. Richards, Sept. 24: Allen's lode, since last reported, is presenting an improved appearance, producing saving work; by the indications the lode is now showing in the end, we are looking forward for a speedy improvement. On Clymo's lode in the 128 we have of late been breaking good saving work from the end, and shall shortly be in a position to set a tribute pitch. Jope's lode in the 128 is still opening out profitable ore ground, and in order to ventilate this level, and for the advantage of working tribute pitches, we have commenced to sink a winze below the 116, and will be hastened on as quickly as possible. The rise in the back of the 116, on this lode, is communicated with the winze below the 104, and we have set the same on tribute to a pare of men at 6s. in 1*l.*, and have set another pitch about 20 fms. further west at 7s. in 1*l.*, and resumed the driving of the 116 in a kindly lode. At Marina's we have put out a cross-cut 15 fms. from surface, as we before mentioned in our former reports, and intersected what we suppose to be Clymo's lode, composed of mundic, quartz, and occasional stones of copper ore, and at such a shallow depth it looks better than might be expected. The sinking of the shaft will be urged on without delay, and in about 8 fms. further the shaft will come in contact with the lode, and at that point we hope to see something good. In all the other bargains there is no change to notice.

WEST GODOLPHIN.—J. Pope, jun., Sept. 20: I have just come up from underground, and it affords me pleasure to say that, on the whole, the mine is looking better. The lode in the 15, driving east of Paull's shaft, is 10 inches wide—a very kindly-looking lode. The stopes in back of this, west of shaft, are worth 10*l.* per fathom. The lode in the 8, driving east of Paull's shaft, is 1 foot wide, worth 5*l.* per fathom. The stopes in the back of this level, east and west of shaft, are worth 3*l.* per fathom. The lode in the shallow adit level, driving west from the cauntor lode, is a fine-looking lode 2½ feet wide, producing some rich stones of tin, worth about 3*l.* per fathom. The lode in Lincoln shaft, sinking below the shallow adit level, is 2½ feet wide, worth about 4*l.* per fathom. The lode in the stopes, south-east of Charlie's shaft, is worth about 8*l.* per fm.

— J. Pope, Sept. 24: Hope lode in the 8 fm. level, east of Paull's shaft, is looking better, and is now worth about 6*l.* per fathom—a pretty-looking lode. The lode in the 15, east of Paull's shaft, is also improving, although I cannot put much value on it yet, but judging from its appearances I except to be able to do so very soon. The other parts of the mine are without change to notice.

WEST MARIA AND FORTESCUE CONSOLS.—Wm. Skewis, Jas. Donnal,. Sept. 25: Capel Tor Lode: In the 60, east of Maria engine-shaft, the driving is by the side of the lode. The same remarks will apply to the 50 east; it will, however, be taken down in each of those levels in the course of next week. The lode in the stope in back of the 50 east will yield 5 tons per fathom, and in the western end it will at present yield 3 tons per fm.—West Maria Lode: In the 60 east that portion of the lode now being carried is yielding good saving work for copper ore, and shows strong indications of a speedy and important improvement. In the last few days this end has intersected several cross-heads and floors, which has resulted in draining all the water from the level above, and also from the winze, which has been sunk rather over 2 fms. in the bottom of the 50, the sinking of which has been resumed; and when it is communicated with the 60 valuable pieces of ore ground will be laid open. The 50 east is suspended for the present, and the men put to sink the winze. The stope in back of this level is yielding 3 tons of ore per fathom. There is no lode taken down in the 40 east; the ground by the side of the lode is favourable for driving, and good progress is being made. The stope in the bottom of this level is yielding 2½ tons of ore per fathom. All the operations throughout the mine are progressing very satisfactorily, and the mine, on the whole, is steadily improving. We have commenced taking out ground to fix the drawing-machine, which will be continued with all possible speed, in order to obtain the required increased drawing, and which will then be done with water-power instead of steam, thereby effecting a considerable saving.

WEST ST. IVES.—J. Evans, Sept. 18: The mine is really opening out splendidly; lode worth from 6*l.* to 7*l.* per fm., and everything about it is congenial for tin. I firmly believe we are going to open up a great mine here.

— T. Uren, Sept. 24: Since I wrote you last the lode is greatly improving in size and quality. We have two beautiful smooth walls about 4 ft. asunder, and the greatest part of it lode. I was around on Saturday making enquiries about a stamps; I think I can have it in a little while hard by.

WEST WHEAL KITTY.—Wm. Vivian, Sept. 25: There is no change in the mine of any importance since last week. We shall have our sale of tin on Saturday, Oct. 5, which will be about 2 tons. We are about to put up another stamps, which will cost about 60*l.* When we have another stamps, and plenty of water, as the winter season comes on we hope to make returns regular as the accounts may be held.

WEST WHEAL TREMAYNE.—S. Roberts, Sept. 24: The lode in the 20 fm. level end has improved since last reported, and presents a very kindly appearance indeed, being 12 in. wide, composed of spar, mundic, and a deal of lead, and very rich stones of yellow, black, and crystalised copper ore; ground hard. No change to speak of in the cross-cuts. In the tribute pitches in the back of the 20 the lode is small and poor at present. We have this time two pitches working in the back of the 16. On Monday I agreed to assist two men a little to clear up the old workings on the south lode, in the bottom of the adit, on tribute, and if they should discover ore to pay to have no assistance on tut-work. We connected the balance-bob last week; the engine and bob work exceedingly well.

WHEAL BULLER.—J. Inch, J. Brown, Sept. 25: Friday last, being our setting, we set the following:—The 92 to drive east, by six men, at 14*l.* per fathom; the lode in the end is large, and producing tin, but not to value. The 92 east, on the south part, to two men, at 11*l.* per fathom, worth for tin 5*l.* per fathom. The 22 to drive west, to six men, at 13*l.* per fathom. The 80 to drive east, to six men, at 14*l.* per fathom, worth 15*l.* per fathom. A winze to sink under this level, to six men, at 14*l.* per fathom, worth 30*l.* per fathom. A stope under this level, to six men, at 7*l.* per fathom, worth 25*l.* per fathom. No. 1 stope, in the back, to six men, at 7*l.* per fathom, worth 30*l.* per fathom. No. 2 stope, in the back, to four men, at 6*l.* 10s. per fathom, worth 18*l.* per fathom. The winze under this level, west of shaft, to six men, at 14*l.* per fathom, but poor. The 70 to drive east, to four men, at 12*l.* per fathom; the lode is large, and producing tin, but not to value. The 60 to drive west on the north branch, to two men, at 8*l.* per fathom; this is producing good stones of copper ore.—Hocking's Shaft: The 80 to drive south through the lode, to two men, at 13*l.* per fathom. The 70 to drive west, to six men, at 11*l.* per fathom, worth 20*l.* per fathom. A winze to sink under this level, to two men, at 11*l.* per fathom, worth 15*l.* per fathom.—Kistie's Shaft: A stope under the 80, to six men, at 5*s.* per ton, worth 36*l.* per fathom. The tribute throughout the mine is looking just as it has for a long time past. We are raising our usual quantity of tin.

WHEAL CREBOR.—J. Gifford, Sept. 23: On Saturday last the following bargains were set:—The 120 west to drive by the side of the lode, by six men, stent the month, at 9*l.* per fathom. The 108 east, on the north lode, to drive by two men, stent 2 fathoms, at 3*l.* per fathom. The 108 east, on the south lode, to drive by four men, stent the month, at 4*l.* per fathom; lode 3 ft. wide, yielding saving work for copper ore. The 96 fm. level cross-cut south to drive by four men, stent the month, at 3*l.* per fathom. The cross-cut north in the 96 east towards the north lode to two men, stent the month, or cut the lode, at 4*l.* 10s. per fathom. The 84 east to drive by two men, stent the month, at 4*l.* 5s. per fm.; lode 3 ft. wide, composed of capel and quartz, with occasional stones of mundic and copper ore intermixed. A pitch in the back of the 108 east by one man and two boys, for two months, at 13s. 4d. in 1*l.* Two pitches in the back of the 84 east by two men in each, for two months, at 12s. 6d. tribute and 12s. 6d. per produce.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Sept. 21: The lode in the new shaft, sinking below the 120, is 2 feet wide, composed of quartz, gossan, flookan, &c., containing a little tin, with black ore and malleable copper; we are making good progress with the sinking of the shaft. There is an excellent bunch of tin in the 100, west from the new shaft; the lode is 4 feet wide, and from the samples we have assayed it will produce about 1¼ ton of tin to the fathom, or in money value fully 70*l.* per fathom. The pitches, on the whole, are pretty well, and we think the men are earning good wages; they are certainly working very spiritedly. No change in the 90 fm. level cross-cut north.

WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, Sept. 25: The lode in 100 west is of the same value as we stated on Saturday—70*l.* per fathom—and a pretty lode. The pitches are looking much the same, and the tributers are getting good wages.

WHEAL KITTY (St Agnes).—S. Davey, W. Polkinghorne, Sept. 21: In the 82 fm. level, driving west of Holgate's shaft, the lode is producing saving work for tin.—New Shaft, Pryor's Lode: No change has taken place worthy of remark during the week. The lode in the 82, driving west of new shaft, is showing a better appearance, and worth for tin 13*l.* per fm. In the 82, driving east of shaft, the lode is 1½ ft. wide, and worth for tin 17*l.* per fm. In the 65, driving west of shaft, the lode is worth for tin 10*l.* per fm. In the winze sinking below the 54 fm. level no lode has been taken down since last report. In the 44 fm. level, driving east of shaft, the lode is producing good stones of tin.—Caunter Lode: In the winze sinking below the 65 the lode is 2½ ft. wide, and worth for tin 15*l.* per fm.—Vottle Lode: In the 24, driving east of cross-cut, the lode is improving in size and appearance, but not producing tin enough to value.

WHEAL KITTY (Uny Lelant).—W. Rosewarne, Sept. 26: North Russoe Lode The lode in the 150 fm. level, east of No. 2 winze, is worth 3*l.* per fathom. The lode in No. 3 winze, sinking below the 140 fm. level, is worth for the length of the winze (9 feet) 5*l.* 10s. per fathom.—New Lode: The lode in the 140 fm. level, east of the cross-cut, is worth 14*l.* per fathom.—South Russoe Lode; The lode in the 30 fm. level, east of the boundary shaft, is worth 8*l.* per fathom. The men we had employed in the 30 end west are now cutting plat at that level; when this is done we shall resume the sinking of the boundary shaft, in which we have a productive lode for tin. We have holed the winze from the 20 to the 30 fm. level, east of shaft, which has laid open a good piece of tin ground.—Gowan Lode: The lode in the 90 fm. level, east of Rogers's shaft, is opening tribute ground.—North Gowan Lode: The lode in the 50 fm. level west of the rise, west of Rogers's shaft, is worth 2*l.* per fathom.

WHEAL MARY HUTCHINGS UNITED.—W. Edwards, Sept. 26: We have completed cutting plat at the 10 fm. level, and have extended the west end 4 fathoms, the lode being about 6 feet wide, worth full 30*l.* per fathom for tin; the end going east is driven about 9 feet, lode 6 feet wide, worth 12*l.* per fathom, with an improving appearance. The water is issuing with great force, and strongly impregnated with copper We have six men engaged in each of these ends, which will be pushed on with vigour. In the deep adit end going east, on caunter lode, we have recently passed through a cross-course, which has shifted the lode a short distance south, but is again forming its regular course, and worth 8*l.* per fathom. The stope in back of the adit still continues to give good work for tin. In the deep adit end west, at the Sidney portion of the sett, we have intersected some branches of a favourable indication for tin. There are several hands employed in extending the dressing-floors, &c. We have now commenced calcining our next parcel of tin. Our works throughout are progressing very satisfactorily.

WHEAL SPARNON.—W. Tregay, E. Chegwin, Sept. 21: The lode in the bottom of the shaft is 3 ft. wide, composed of peach, prian, gossan, quartz, capel, and spots of mundic. The appearance of the strata has considerable improved in the last few feet sinking, and we expect shortly to meet with branches dropping into the lode from the north side.

WHEAL TREVENNA.—W. H. Willcock, Sept. 26: The hands we have kept on are working in a spirited manner breaking a large quantity of tinstuff, and we are keeping the stamps employed night and day. On the dressing-floors they are also getting on first rate preparing a batch of tin for the smelters, showing that the mine with proper energy, attention, and economy can do well.

WHEAL UNY.—Samuel Coade, Matthew Rogers, Sept. 21: The 130, east of engine-shaft, is worth for 6 feet wide 24*l.* per fathom. The 100, east of ditto, is worth 8*l.* per fathom. The 130, west of incline shaft, is worth 12*l.* per fathom. The 120, west of incline shaft, is worth 8*l.* per fathom.

FOREIGN MINES.

CAPE COPPER.—The yield from the Ookiep Mine was larger in the month of July than in any previous month since the company was formed, and the percentage by assay was also high. The mine looks well in its deepest parts, and the ore ground in the western stope in the main pit is expanding considerably. The return of ore for July was 702 tons. The repair of the old road is proceeding actively, and the construction of the new road, by convict labour, is progressing satisfactorily. An additional number of these labourers is shortly expected, which will make the number up to 220. By the aid of this force a portion of the new line of road will, it is anticipated, be opened for traffic at the commencement of the ensuing riding season, by which a heavy ascent will be at once saved. A meeting of the superintendent and the riders employed by the company had been held, at which a reduced tariff for the carriage of ore down and fuel up was adopted. The result of this arrangement will be a considerable saving to the company. The Celt steamer has brought 39 tons of regulus and 35 tons of ore. The Croydon has brought 450 tons of ore and 95 tons of regulus. The Ocean King had on board at Hondeklip, on Aug. 16, 280 tons of ore, and would complete a full cargo of 600 tons without delay: 463 tons of ore have been sold by public ticketing at Swansea during the past month, and realied 15*s.* 1*d.* per unit.

CAPULA.—C. Paull, August 26: The lode in the Esperanza end is very promising, with spots of ore; the part we are driving on corresponds with the direction of San Jose lode. I consider the main lode to be still south of the cross-cut we are driving, heaved, no doubt, by the cross branch on which we drove the cross-cut. There is no alteration of note in San Enrique end since my last. We are driving on the north part, it being more favourable. After a few more varas we shall again cut through the main part of the lode, where I trust we shall find good azogue ores. We have resumed the rising in San Jorge; the ground is very hard, the branch of ore without alteration. I have sent to Mexico this month 230 marcs 3 ozs. of silver, the produce of 164 cargas of metal, beneficiated in the barrels at San Pascual; nett value, $1878. I expected about 240 marcs, but one of the pinas had quicksilver in it, not properly burnt in the capellina. The machinery for Capula was dispatched from Vera Cruz on the 7th inst., at the very high price of $48 per carga of 16 arrobas. The freight will amount to $5751·60; charges at Vera Cruz, storeage, commission, exchange, &c., $940·54: making a total of $6692·14 to bring the engine to Real del Monte. I expect it will be some time yet before the wagons will arrive, owing to the heavy rains and bad state of the roads.

RHENISH CONSOLS.—George Sweet, Sept. 19: Christiania: The lode in Pittar's sink is still worth 5 tons of lead ore per lachter. The driving west, on the course of the lode in the 10, is unproductive. There is no improvement in the cross-cut driving south in the 17 lachter level. The stopes are without any material change.—Bliebach: The winze sinking below the 10 lachter level, on the south lode, is unproductive. The driving east on the south lode, in the 10 lachter level, is yielding both lead and blende. No lode has been taken down in the driving west, on the north lode, in the 10 lachter level, since my last. A stope in the adit level, on the north lode, will afford 15 centners of lead ore per lachter. A winze sinking below the adit level, on the north lode, will yield 12 centners of lead ore per lachter. Stopes Nos. 1 and 2, on the middle lode, will afford 15 centners of lead ore per lachter.—Fahrenberg: In the driving south, in the 10 lachter level, there is no improvement. One tribute pitch at work, north of the shaft, in the 10 lachter level.

VAL SASSAM.—Capt. T. Rickard, Sept. 9: Ursera: During the last month the Cantina gallery advanced 1·70 metres only, the men having been employed part of the time in opening out a little upon the lode in the back of the level, in order that we might be able to explain to ourselves what otherwise seemed to be a tangle there. We have now reason to believe that the sole of that gallery at the present end touches, or very nearly so, upon the bottom of the inverted saddle, of which we have before spoken; the lode has improved in the last few feet driving, now worth about 15*l.* per fathom; the end is re-taken by four men, at 90 frs. per metre. The lode in the stopes, and also in the rise above this level, continues to present about its usual appearance, and is yielding ore to the extent of 15*l.* to 18*l.* per fathom; the rise is re-let at 90 frs. per linear metre, and the stopes at 16 frs. per cubic metre. In sinking in the bottom of the Middle Calcina gallery we have still good ore ground; its yield for the last month has been equal to nearly 25*l.* per fathom. The Upper Calcina end has gone forward 3 metres in the month; it has the same promising appearance as it was last described to have, but does not yield any considerable quantity of ore; relet to two men, at 70 frs. per metre, and 3-10ths tribute for what ore can be saved. The three pitches in this gallery have turned out pretty well during the past month. In Taylor's gallery there is nothing new to report, as very little was done there last month. The driving spoken of in the last report as being about to be begun for the further drainage of the pitches above the Del Pozzo gallery was advanced 3·90 metres during August, and for some part of the time there was a very nice leader of ore in the end, the present end is, however, poor again; it is re-set to four men and a boy, at 95 frs. per metre. Del Pozzo gallery was driven 1·90 metres in the month; lode without change; the end is re-set to four men, at 90 frs. per metre. The raisings at this mine during the take of July and August have amounted to nearly 12½ tons. The pitches are, on the whole, just the same now as during the last two months, and we might count upon about the same produce from them, were it not that in those of the Calcina gallery the water has become very troublesome again, and renders further working in those bottoms so difficult and expensive that we have decided upon suspending that part of the works until the rise making from the level below shall have struck through and effected the necessary drainage, and provided the means of getting rid of the stuff without the intervention of tackle. The men from this place have in the meantime been placed at the surface to seek for a fresh piece of tribute ground further to the west, where we are not without the hope of making a discovery. At Roffia during August operations have been confined to the driving of a cross-cut, by means of which we trust in the course of the present month to get to the lode at a point that will unwater the surface stopes made there during the summer. We shall during the autumn, as arranged with Mr. Richard Taylor, make trials similar to this at two or three other points along the back of the lode at the Roffia part of the concession, in order to be able the better to judge whether or not that ground be of the nature and extent to justify the outlay that would be needed to provide the required means of transport, &c.—Tospino: The lode in the San Giovanni end is for the present nearly without ore, although it is still kindly looking, and will, we think, soon become orey again. The men have during part of the past month opened out a little in the ore lately passed through there. They have broken some good ore stuff, and have prepared a place for a pretty good stope during the winter. The extraction of the stopes at this mine during August has, we estimate, amounted to nearly 1000 cubic metres, which is equal to about 800 tons of stuff, fit for the lavories. During September the raising will be somewhat less, several of our workmen having suddenly quitted the works. The sampling at Tospino we estimate at 12 tons. The quantity would have been greater but for the insufficiency of water to drive the crushing-mill. We have made one reservoir, and are now making a second, in order to do the most that we can with the water there is. At Ursera our sampling for August is about 5 tons; it is ore of higher produce than that of the preceding month.—P.S. Since the above report was written an improvement has taken place in the lode in the Cantina gallery. There are also signs of a change for the better in the gallery Del Pozzo.

WEST CANADA.—W. Plummer, Sept. 3: Our setting for September and October was held on Saturday last, on which occasion we lessened to some extent the number of miners at Wellington and Copper Bay. We thought proper to stop the bottom level at the new engine-shaft, the 10 going west of ditto, and the level west of Grenfell's shaft—12 men. At the Bruce we have stopped the 50, at Ferrier's shaft; this point is well advanced, the lode generally carries copper, but at no place in sufficient quantity to pay for working at the present price of copper.—Bray's engine-shaft is down about 8 fathoms below the 50, the wall in it is not quite so large, but is very kindly in its character. The 50, west of Palmer's, looks a little better, and is easier for driving. The lode in Colling's shaft (Wellington) has somewhat improved, and promises further improvement. All the stopes are without change.—Bruce Mines: The lode in the 25, east of Trial's, is much the same as last reported; it will yield about 1½ ton per fathom. The stope above the level has very much improved, but the stope below the level is not so good. The stope on the west yields from 1¼ to 1½ ton per fathom. The lode going west of Taylor's is looking better, and we have thought proper to increase the hands from four to six. Going east the lode is poor, but seems to be getting wider, which we think is a favourable feature. In all respects our mining works are going on as usual, and everything is being done that we can think of for the interests of the concern.

CORNISH PUMPING ENGINES.—The number of pumping-engines reported for Aug. is 23. They have consumed 1477 tons of coal, and lifted 11·5 million tons of water 10 fms. high. The average duty of the whole is, therefore, 52,600,000 lbs., lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Chiverton—Cookney's 60 in.	Millions	54·0
Cargoll Mines—Michell's 72 in.		64·9
Chiverton Moor—70 in.		66·3
Cook's Kitchen—50 in.		52·6
Great North Downs—Sleggan's 70 in.		55·1
Great Work—Leed's 60 in.		61·8
North Roskear—Doctor's 70 in.		59·2
Providence—40 in.		52·8
South Wheal Frances—Marriott's 75 in.		53·0
West Chiverton—Hawke's 80 in.		77·6
West Wheal Seton—Harvey's 85 in.		77·9
Wheal Seton—Tilly's 70 in.		64·1

THE CHIVERTON DISTRICT.—At the recent meeting at Falmouth of the Miners' Association, Dr. Foster read the following account of an excursion by the pupils of Breage, Camborne, and St. Just mining classes, written by Mr. Francis Oats, of the St. Just class:—

"After having arrived at West Chiverton we met one of the agents, and went with him into the account-house, where he gave us every necessary information, and not only here but afterwards when he accompanied us over the mine. We found that the mines were shallow, compared with those in our own districts; the ore was raised from three lodes,—William's, Valpy's, and Elizabeth's, running S.W. and N.E., dipping S. The lodes are most productive when running from 5° to 14° N. of magnetic E., and when most perpendicular. Valpy's and Williams's lodes have much the same dip, sometimes joining, sometimes apart. Elizabeth's seems to have a little more dip. They have to cross-cut at the shallow levels for it, and it is supposed that at the 110 fm. level the whole three are together. There is something remarkable about Elizabeth's lode—that is, in tracing it upwards it seems to die out. The ore in the lode dips westward, and a gritty coarse grained rock is more congenial for it than a fine shiny one; cross-cut dip with the ore. Elizabeth's lode contains copper and iron pyrites with galena: Williams's contains galena, blende, iron pyrites and a little copper pyrites; Valpy's contains galena, clay, and quartz, with no blende. The dressed lead ore contains from 80 to 81 per cent. of lead, and 32 to 34 ozs. per ton of silver. They get about 19*l.* 5s. per ton (21 cwts.) for their ore. They also sell some blende at five guineas per ton; we were informed that it was ground, and then used to make a brown paint. After leaving the account-house we visited the lower dressing-floors. The ore was crushed with 2-feet rollers, having four grooves to make the rolls grip large pieces of stone. After the stuff had left the rolls it was passed through a cylindrical revolving sieve, having three holes to an inch, inclined so as to receive the stuff coming from the rolls at its upper end, let the fine pass through the holes, and that which was not sufficiently crushed drop through at the lower end into buckets placed on the inside of the ring of a large wheel revolving with the rolls; this going round carried the stuff along with it and when the stuff arrived at the top it dropped off from the wheel into a shoot, which carried it into the rolls to be re-crushed. The stuff which was sufficiently fine was washed into strips: that deposited in the strips was jigged: the slimes went into pits. Three buddles were used for dressing them, one for the fine, one for the middle size, and one for the rough. The finest stuff is said to contain the largest quantity of silver. After leaving the dressing floors, we saw a new steam capstan in course of erection at the new engine. The shears consisted of ½-inch boiler-plate made into 20-inch hollow cylinders; one of the legs at the bottom was supported by a cross-piece, and this by two legs. Within these two legs was fixed the drum on which the capstan rope was to work, having a toothed wheel attached to it, worked by an endless screw at the bottom. This is again worked by an engine having two horizontal 8-inch cylinders of 1 ft. 6 in. stroke, and is fed with steam from the draught engine boilers. The entire cost of this engine, delivered on the mine, is 120*l.* We also saw at the blacksmiths' shop a steam hammer for forging, of 12-cwt. blow, the current cost of which was 10½*d.* a day. We now went on to North Wheal Chiverton, and found that the lode ran due east and west, dipping south, varying in width from 2 ft. to 3 fms. The lode seemed to consist of quartz, blende, iron pyrites, and galena. On our return we visited Chiverton Moor and Great South Chiverton, looked over most of the surface work, and observed some remarkably light coloured yellow transparent blende at the latter place. This ended our excursion, and we returned grateful to yourselves for the pleasant and instructive opportunity that you had afforded us."

ALTITUDE OF MINES.—A recent Government report gives the following interesting figures relative to the elevations of some of the principal mines and mining regions of the Pacific slope:—The Sierra Nevada rises in many places to a height of 9000 ft., or even more, and from the comb of the ridge to the level of the valley the distance in a direct line is from 40 to 50 miles; and the descent of the streams, with all their bends, is more than 100 feet to the mile. With the rapidity of current consequent on such a descent, they have worn very deep channels, leaving steep and high intermediate hills. It is on the side of the mountains, thus cut into great canons, that most of the mining in California is done. The average elevation of the placers of the Sacramento basin may be estimated at 2000 ft. The mines in the valley of Klamath River are at an elevation of about 2500 ft. The silver mines of Kearsarge, in California, are 10,000 ft. above the level of the sea. The silver mines of Alpine county are from 5000 to 6000 ft. above the sea. The New Almaden quicksilver mines are 1000 ft. above the sea. The mines of the Comstock are from 5000 to 6000 ft. above the sea. Reese River and Esmeralda mines are about 7000 ft. above the sea. The Idaho mines vary from 3000 to 6000 ft. above the sea. The mines of Arizona are at various elevations, from 300 to 3000 ft. above the sea. Those on the banks of the Colorado are, perhaps, as near the level of the sea as any known.—*American Journal of Mining.*

THE DIVINING ROD.—S. Baring Gould, M.A., has published a book entitled "Curious Myths of the Middle Ages," in which he gives an article upon the divining rod, which is full of interest, and treats of the power claimed by some persons of being able, by the aid of a forked hazel rod, which being held loosely inclines to the earth, to discover the seat of spring water or hidden treasure. The whole story of Jacques Aymar (the date is 1692, the scene in France) is given here to exemplify this mysterious power, and concludes with his *exposé* and downfall. To this day there are persons in the rural parts of England who are employed to use the divining rod for the discovery of the best place wherein to work a well. It will be remembered that, in "The Antiquary," Scott makes Dousterswivel pretend to find buried treasure in the ruins of St. Ruth, and there is a very entertaining and instructive article in an early number of the *Quarterly Review*, most of the materials of which were supplied by Sir Walter. Mr. Gould thus speaks of the modern use of the divining rod:—"The rod is still employed, I have heard it asserted, by Cornish miners, but I have never been able to ascertain that such is really the case. The mining captains whom I have questioned invariably repudiate all knowledge of its use. In Wiltshire, however it is still employed for the purpose of detecting water; and the following extract from a letter I have just received will show that it is still in vogue on the Continent:—"I believe the use of the divining rod for discovering springs of water has by no means been confined to mediæval times, for I was personally acquainted with a lady, now deceased, who has successfully practiced with it in this way. She was a clever and accomplished woman. Scotch by birth and education, by no means credulous, possibly a little imaginative, for she wrote not unsuccessfully, and of a remarkably open and straightforward disposition. Capt. C——, her husband, had a large estate in Holstein, near Lubeck, supporting a considerable population, and whether for the wants of the people or for the improvement of the land, it now and then happened an additional well was needed. On one of these occasions a man was sent for who made a regular profession of finding water by the divining rod. There happened to be a large party staying at the house, and the whole party turned out to see the fun. The rod gave indications in the usual way, and water was ultimately found at the spot, Mrs. C—, utterly sceptical, took the rod into her own hands to make the experiment, believing that she would prove the man an impostor, and she said afterwards she was never more frightened in her life than when it began to move, on her walking over the spring. Several other gentlemen and ladies tried it, but it was quite inactive in their hands. 'Well,' said the host to his wife, 'we shall have no occasion to send for the man again, as you are such an adept.' Some months

after this, water was wanted in another part of the estate, and it occurred to Mrs. C— that she would use the rod again. After some trials it again gave decided indications, and a well was began and carried down a very considerable depth. At last she began to shrink from incurring more expense, but the labourers had implicit faith, and begged to be allowed to persevere. Very soon the water burst up with such force that the men escaped with difficulty; this proved afterwards the most unfailing spring for miles around."

CENTRAL AMERICAN ASSOCIATION.—The directors have received by the mail which has just arrived a further remittance of 104 ozs. of gold from the Javali Mine. The details will be given in next week's Journal.

FRONTINO AND BOLIVIA (SOUTH AMERICAN) GOLD MINING COMPANY.—The advices to hand by the West India packet are dated as far back as May, and, therefore, the intelligence communicated has been anticipated by the letters of a subsequent date. There is no remittance of gold.

THE EBBW VALE COMPANY.—A rumour having been pretty generally circulated that there was about to be a change in the management of the works of this company, we are requested to state that there is no truth whatever in the report, and that Mr. Abraham Darby has no intention of retiring from his position as managing director.

NORTH WHEAL CHIVERTON.—Within the past few days this mine has been visited by Mr. G. Noakes, F.G.S. (Chairman of Great Wheal Vor), accompanied by a member of the committee. Mr. G. Noakes states "that he was much pleased at the progress made in the development of the mine; that every point so far has been carried out and accomplished within the period fixed; that the men are now sinking the engine-shaft below the 80 fathom level, with every prospect of sinking to the depth decided upon to prove the lode at an earlier period than was at first anticipated; and that the prospects of the 80 are still of a most encouraging character."

MINING NOTABILIA.

At GREAT RETALLACK the branch of silver-lead recently met with in the cross-cut for the No. 1 lode is being opened on north and south, and is worth upwards of 8 cwts. of ore per fathom in each end. The main part of the lode is expected to be met with daily. In the 9 fm. level the branch was without ore, and the main part of the lode produced good stones of lead. From the great improvement that has taken place in the branch in 11 fathoms sinking a good discovery is anticipated when the other portion of the lode is reached, and the two parts will form a junction a few fathoms to the northward of the shaft. The cross-cut is letting out a deal of water, and has drained North Retallack shaft 50 fathoms distant, leading to the inference that a continuous lode exists between the two shafts. No. 2 lode has improved, and the agents hope to sample 20 tons of silver-lead in about three weeks. At North Retallack sinking has been resumed, and the lode in the shaft is producing excellent work for lead.

At WHEAL GRENVILLE a fine lode of tin, worth fully 70*l.* per fm., has been met with in driving the 100 fm. level west. The ore is of a different character to anything before seen in the mine, and should it continue the financial position of the mine will soon be considerably improved.

The prospects of EAST WHEAL GRENVILLE are better than for a long time past. Driving has been commenced east and west in the 110 fm. level, and in the latter place the end presents every appearance of being near a course of ore. The 95 west has improved, and in the bottom of the level, a few fathoms in advance of the 110, there is a bunch of grey copper ore, worth in places nearly 100*l.* per fm. The 110 being in easy ground, and the ore dipping towards the shaft, a good discovery may any day take place.

PERRANZABULOE.—Things begin to brighten in this interesting mining locality. At a recent meeting of the adventurers in Budnick Consols the accounts showed a profit on the last three months' working, which cleared off all the outstanding liabilities, and left a balance in favour of the company. The agents were requested to secure additional stamping-power in the neighbourhood, in order to put more men to work, the tinstuff being practically inexhaustible for many years to come; and by so doing the profits will be increased so as to render the mine in a dividend position early in next year. This, it is hoped, will stimulate capitalists to move other mines in the neighbourhood, and set the parish in its usual flourishing condition.

WHEAL CRELAKE.—The sales of ore do not represent the whole returns from this mine, as there are, in addition, regular sales of mundic, from 18*s.* to 27*s.* 6d. per ton, which costs little to raise. The excellent sale of 201 tons last week, which fetched 874*l.*, more than pays the costs of the mine, while there are several hundred pounds for mundic to represent profit. The reserves are increasing, and the mine is being worked fairly, so that there is every likelihood of Crelake being ere many months a dividend mine. It is not the mine about which the most noise is made by sharedealers that is the most valuable.

EAST GUNNISLAKE AND SOUTH BEDFORD CONSOLS.—Captain A. James, at the request of Messrs. Dennis and M'Keand, inspected this mine, and respecting the Impham lode, says—"When we consider the situation of this lode, practically or geologically, in connection with its masterly appearance, it seems to admit of only one conclusion—that it is a speculation of no ordinary character."

WEST LISBURNE.—In these days, when people who hold good mining speculations, are grumbling at the tardy disposition of investors, and investors are finding fault with the ways of promoters of companies, it behoves those who have good things to offer, in order to give the public a fair opportunity to judge of the respective merits of the different schemes brought to notice; I say it is incumbent on these caterers for public investment to afford all the evidence possible as to the nature of their property. I am aware that prospectuses are overlaid with presumptious assertions as to the certainty of success, but the public require proof, not assertions, in many cases founded merely on imaginary circumstances. I think in this respect the West Lisburne prospectus offers a good example, for the matter setting forth this project not only consists of facts as to the yield of the different surrounding mines, but there is a ground plan, drawn to scale, showing the area and form of the property, and the lines on which the lodes traverse, and there is also a map, taken from the Ordnance Map, showing the positions of the mines in the district, with the lines of the lodes, according to the Government mining engineers. In having the whole of these circumstances placed before the eye, it is not difficult to draw a conclusion, not only as to the truth of the statements made, but deductions also as to the xistence of the mine from good geological evidence.

DALE.—Capt. Niness being as confident as ever that this mine will yet prove highly remunerative, it is to be hoped the shareholders will respond to the call for more capital—especially as two very important points can be proved in one month's working. The vein at the 37 is also now worth 30*l.* per fathom.

WEST ST. IVES.—The improved state of the mine is evident. Report says that a second St. Ives Consols may be looked for. The lode which has so improved is exceedingly easy for driving, and the produce increases as they drive further on it. It has recently been inspected by an independent agent, and he says that he found the mine better than it had been reported. This must be gratifying to the managers.

TAMAR VALLEY.—Having visited this property, I have great pleasure in handing you my report thereon. The property, or sett, is about 500 fms. on the course of the lodes. The stratification is very congenial for silver-lead, and is precisely the same sort of killas as the Great Tamar Silver-Lead lodes made all their rich deposits in. There are two lodes in the sett, well defined, and showing the strongest indications of rich deposits of silver-lead. The lode on which you are working is the best; an adit has been driven on it for about 30 fathoms, and as the hill rises in this direction 60 fathoms of backs might be obtained by continuing the adit 30 fathoms more. This adit is said to have been driven by the ancients; no history of its being worked can be found. The lode throughout this drivage is a very kindly one, from 1 to 2 feet big, composed of horn-spar, prian, quartz, fluor-spar, and lead ore. A few fathoms in from the mouth of this adit a bunch or shoot of ore was evidently met with, and stoped away for 8 or 9 fathoms both in length and depth. Three slides are to be seen in the adit; these are favourable for large deposits of ore, and wherever seen in the rich Tamar Mines were always accompanied with good bunches of silver-lead ore. The shaft is sunk 10 fms. below the adit. A level has been driven at this depth about 10 fathoms in a lode varying from 1 to 2½ feet big; 5 fathoms of this lode is a good valuable one, worth 5 to 10 cwts. of rich silver-lead ore to the fathom. A good lode has gone down in the bottom of this level, and the next lift will, in my opinion, open up a valuable piece of ore ground. The present end is worth 1 cwt. of lead to the fathom. The stopes in back of this level are worth 3 to 5 cwts. of lead per fathom, and all the lode in this drivage will have to come away on tribute. This lode is opened on the back 100 fathoms south of the present end; it is composed of white iron, quartz, gossan, and spots of lead—a very promising lode. This lode is within 50 fathoms of the old "Bulls Spill" lode, which in former times produced large quantities of lead, but not so rich for silver as the present lode. A cross-cut from the south lode will prove this lode at a greater depth than seen in the last working, and I would recommend this being done at some future time. Tamar Silver Valley can be worked very cheaply; a good stream of water runs close by the mine; available for dressing or pumping purposes. The River Tamar is within 300 yards of the mine, where ore can be shipped and materials landed at a trifling cost. Looking at the advantageous position of your sett, the facilities for working, and the important discoveries of silver-lead ore made in the 18 fm. level south, I am strongly of opinion that it will make a great and profitable mine; therefore I would advise you to retain and increase your interest as soon as possible. —JOSEPH MITCHELL, General Inspector of Mines.

MINING AND ITS PROSPECTS.—(From Mr. Peter Watsons "Weekly Mining Circular and Share List," of yesterday, No. 443, vol. ix.):—"The Stock and Share Markets have throughout the week been firm in character, and as the holidays are nearly ended, we may anticipate a much more favourable state of things generally. The condition of the money market, and the improved tone with respect to commercial matters, as indicated again this week by a further increase in the railway traffic returns, conclusively show that investors should take advantage while the opportunity is offered of depreciated values. As to the Mining Share Market, the fortnightly settlement, which was completed to-day, shows that there has been a very large amount of business transacted. Indeed, it is not too much to say that anything like an equal amount of business has not been transacted in one settlement during the past two years. As my readers are aware, I have, during the past few months, again and again directed attention of the state of the tin trade. In referring to this subject last week I stated my conviction that a further rise was imminent, but I must confess that I hardly anticipated in the face of the Banca sale of 70,000 slabs, as against 130,000 at the corresponding sale of last year, an advance until some short time after the sale had taken place. The fact, however, is that a rise of 3*l.* per ton took place on Tuesday last in the price of tin metal. The Banca tin sold realised a satisfactory figure, about 54¼ fls., which is equal to 96*l.* per ton delivered in London. It is also satisfactory to find that in several of the Cornish and Devon mines important improvements have taken place, and discoveries made, so that, upon the whole, we have additional reason to believe that we have before us in mining a long career of success and prosperity."

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, SEPTEMBER 27, 1867.

COPPER.	£	s.	d.	£	s.	d.
Best selected..p. ton	84	0	0-	85	0	0
Tough cake and tile	80	0	0-	81	0	0
Sheathing & sheets.	81	0	0-	83	0	0
Bolts	83	0	0-	—		
Bottoms	85	0	0-	—		
Old (Exchange)	72	0	0-	—		
Burra Burra	85	0	0-	86	0	0
Wire.....per lb.	0	1	0-	0	1	0½
Tubes	0	0	11½		1	0

BRASS.	Per lb.
Sheets .....per lb.	9d.-10d.
Wire ..... ,,	8½d.-9½d.
Tubes ..... ,,	10½d.-11d.
Yellow Metal Sheath.p. lb.	7½d.- —
Sheets ..... ,,	7d.-

SPELTER.	Per ton.
Foreign on the spot.	£21 10 0- 21 15 0
,, to arrive ..	21 10 0- 21 15 0

ZINC.	
In sheets	£27 0 0- —

TIN.						
English blocks			96	0	0	
Do., bars (in barrels)			97	0	0	
Do., refined.....			99	0	0	
Banca			94	10	0	
Straits	£90	0	0-	90	10	0

TIN-PLATES.*	Per box.					
IC Charcoal, 1st qua.	1	7	6-	1	9	6
IX Ditto, 1st quality	1	13	6-	1	15	6
IC Ditto, 2d quality..	1	5	6-	1	7	6
IX Ditto, 2d quality..	1	11	6-	1	13	6
IC Coke.....	1	3	6-	1	4	6
IX Ditto	1	9	6-	1	10	6
Canada plates,p.ton..	13	10	0-	—		
Ditto, at works	12	10	0-	—		

IRON.	Per ton.					
Bars Welsh, in London	6	10	0-	—		
Ditto, to arrive	6	10	0-	—		
Nail rods	7	0	0-	7	10	0
,, Staffd. in London	7	10	0-	8	10	0
Bars ditto	7	10	0-	9	10	0
Hoops ditto	8	10	0-	9	12	6
Sheets, single	9	5	0-10	0	0	
Pig No. 1, in Wales ..	3	15	0-	4	5	0
Refined metal, ditto..	4	0	0-	5	0	0
Bars, common ditto..	5	15	0-	6	0	0
Do. mrch. Tyne or Tees	6	10	0-	—		
Do., railway, in Wales	5	10	0-	6	0	0
Do., Swed. in London.	10	5	0-	—		
To arrive	10	5	0-	—		
Pig, No. 1, in Clyde ..	2	15	3-	3	2	0
Do. f.o.b. Tyne or Tees	2	9	6-	—		
Do. Nos. 3,4, f.o.b. do.	2	6	6-	2	7	0
Railway chairs	5	10	0-	5	15	0
,, spikes	11	0	0-12	0	0	
Indian Charcoal Pigs, in London p. ton..	7	0	0-	7	10	0

STEEL.	Per ton.					
Swed., in kegs(rolled)	14	5	0-	—		
,, (hammered)	15	0	0-	—		
Ditto, in faggots	16	0	0-	—		
English, spring	17	0	0-23	0	0	

QUICKSILVER (p. bottle)	6	17	0-	—		

LEAD.	Per ton.					
English Pig, com.....	19	12	6-	—		
Ditto, LB.....	20	0	0-	—		
Ditto, WB	21	15	0-	—		
Ditto, ordinary soft†	20	0	0-	—		
Ditto, sheet.....	20	10	0-20	15	0	
Ditto, red lead	20	15	0-21	5	0	
Ditto, white	27	0	0-30	0	0	
Ditto, patent shot....	23	0	0-	—		
Spanish.....	19	5	0-19	10	0	

* At the works, 1*s.* to 1*s.* 6d. per box less.
† A Derbyshire quotation: not generally known in the London market.

REMARKS.—The Metal Market continues, unfortunately, to present the same appearance of depression as it has done for so long a period, and the hopes that have been entertained of a speedy termination of this unsatisfactory state of things seemed destined to be disappointed. It really appeared a short time since that a change for the better was coming, but the activity in business remained only for a very limited period, and the market again relapsed into its former condition of dulness. How much longer it is likely to be before activity in the market returns seems now impossible to say, but it is earnestly to be hoped that business will soon begin to flow into its accustomed channel, and a termination be come to of this unusually protracted depression. It is very surprising that commercial affairs should not have improved before this, as there are so many circumstances which would lead to the expectation of a good business being now done, especially the continued remarkable easiness of the money market, and the very large amount of capital waiting for investment, both which will very materially facilitate any movement which may take place in the right direction, and aid the bringing about of a more encouraging condition of business generally. The advices from America are more satisfactory, and the prospect of an improved demand from the United States for metals generally, and especially from railway iron, is very good. This is so far satisfactory, and it is to be hoped that the orders from India will soon show a considerable extension.

COPPER.—The amount of business transacted in this metal during the week has been comparatively trifling. Although there is no actual alteration in prices, yet they appear certainly less firmer than they were, and, perhaps, if business were to offer a concession in price might be made.

IRON.—The preliminary meeting of the South Staffordshire Ironmasters' Association was held at Birmingham, on Thursday, when, as anticipated, no alteration was made in prices. The demand continues pretty good, and it is generally agreed that the trade is better than for some time past. Local buyers who have been able to get the small makers to accept low rates now find this more difficult, as second-class makers are certainly not selling so low as they were. The orders from the United States continue tolerably good. In Welsh the improving tendency of the trade is, upon the whole, maintained, and the general belief is that orders will be more plentiful at the commencement of the next quarter. There is considerable animation in the shipments to the United States, and business with that country seems to have lately revived. To the other foreign markets the exports keep about the same. In the home demand there is no change to note since last report, the new quarter being anxiously looked forward to, because it is expected that then buyers will enter the market more freely. Quotations for pigs are well maintained, and sales are effected without much difficulty. In Swedish iron the active demand has ceased for the present. In Scotch pig-iron there has been a good deal of animation in the market during the week, and considerable sales have taken place; prices have, however, fluctuated very little, and still remain at 54*s.* 3d. cash.

LEAD.—A moderate business is still doing, and prices remain as formerly quoted.

TIN.—On Tuesday the smelters of English announced an advance of 3*l.* per ton, making 96*l.* for blocks, 97*l.* for bars, and 99*l.* for refined. The Dutch Trading Company's half-yearly public sale of Banca took place at Rotterdam, as announced, on Thursday, when the whole quantity offered was sold at 54½ fls., equal to about 94*l.* 10*s.* here; as this price, however, did come up to the anticipations, the price of Straits became unfavourably affected, and although previously to the sale business had been done at 92*l.* cash, yet afterwards transactions in Straits took place at 90*l.* 10*s.* and 90*l.* cash.

SPELTER.—The market has not exhibited much activity during the week, but the price for parcels on the spot has rather improved, and is now quoted at 21*l.* 10*s.* to 21*l.* 15*s.*

TIN-PLATES.—The enquiry is tolerably good, both coke and charcoal being in fair request.

STEEL and QUICKSILVER remain as formerly.

BIRMINGHAM, SEPT. 27.—Rylands' "Iron Trade Circular" says—The iron trade is quieter, and awaits quarter day, although the preliminary meetings have determined on making no change. Pigs are stiffer. Bars are steady. Hoops, sheets, and angles are better, and plates are quiet.

LIVERPOOL, SEPT. 26.—Messrs. Knowles, Gorst, and Riso write—Copper: For three weeks now we have had very dull markets, the present being the dullest. It is difficult to quote Chili bars, 72*l.* is the last price paid, and 78*l.* for ingots, but to-day these prices cannot be obtained. Ores and regulus are firm at 15*s.* Tin has been strong all the week, and prices advanced to 92*l.* for Straits on the spot. The Dutch sale to-day went at 54½ fls., being lower than was expected, and, consequently, disappoints the trade. English tin advanced 3*l.* yesterday, and smelters are very firm, being full of orders.

MIDDLESBOROUGH, SEPT. 26.—The "Iron Trade Review" states—The Cleveland iron trade is tolerably active. Foreign shipments are not well maintained. Good orders from Wales and Scotland continue to come to hand. The leading makers are well sold for the present year, and are not booking orders at present prices. The stock in store is now 74,922 tons. Rail mills are busy. Plate-makers are not doing much, except in a few cases. Bar-mills have not been working regularly for a long time.

COAL-MARKET.—The fresh arrivals this week only number 105 ships. House coals have met a free sale, and a further rise in price of 6d. has been established. Hartleys have continued a steady business of last week's currency. Hetton Wallsend, 22*s.*; South Hetton Wallsend, 21*s.* 6d.; Hartlepool Wallsend, 21*s.*; East Hartlepool, 21*s.* 3d.; New Belmont Wallsend, 19*s.* 3d. Unsold, 2 cargoes; 15 ships at sea.

EXPORTS OF COAL.—By the Monthly Circular of Messrs. Higginson, Liverpool, we learn that the quantity of coal exported in August was 994,351 tons, against 948,664 tons in the corresponding month of 1866, showing an increase of 45,697 tons. The particulars are—From the Northern Ports, 515,158 tons; Yorkshire, 51,781 tons; London, 5405 tons; Liverpool, 60,313 tons; Severn Ports, 285,198 tons; and Scotch Ports, 76,506 tons. The increase was—Yorkshire, 12,378 tons; London, 2323 tons; Severn Ports, 22,486 tons; Scotch Ports, 12,374 tons. The decrease—Northern Ports, 2440 tons; Liverpool, 1424 tons. Total, January to August, 6,316,649 tons; same period last year, 6,336,846 tons: decrease, 20,197 tons.

The standard for copper ore, after rising for several weeks in succession, dropped unexpectedly on Thursday 3*l.* per ton. The reason for this fall, so far as we can learn, is the anticipation of imports from Chili rather in excess of what had been looked for by the trade. It is the general opinion, however, that after the advices by the next two or three mails there will be a gradual reduction of imports, in consequence of the heavy losses sustained by shippers through the low prices which have ruled so long. Tin has risen 3*l.* per ton, and the market for this metal seems to be steady and improving.

THE MINING SHARE MARKET during the week has been very dull, and the depression has rather increased by the fall of the standard on Thursday; and, in consequence, prices, with few exceptions, are quoted lower. In addition to the settlement of the fortnightly account, which took place on Friday, there have been transactions to a moderate extent in Prince of Wales, Chontales, Wheal Grenville, Chiverton Moor, Tincroft, South Frances, Wheal Basset, West Chiverton, East Grenville, North Treskerby, Providence Mines, East Carn Brea, Buller, East Russell, Great Laxey, Herodsfoot, Marke Valley, North Crofty, and a few others. West Chiverton, 64 to 65; the 110, west of Hawkes', when last cut through was worth 60*l.* per fathom; north part, 15*l.* per fathom; the winze sinking below the 100, east of Hawkes', and 9 fms. before the 110 end, is down 2 fms., and worth full 50*l.* per fathom; No. 1 winze, below the 100, west of Hawkes', is worth 60*l.* per fathom. The 100, west of Hawkes', when last taken down, worth 60*l.* per fathom; the part now being carried, 25*l.* In the 90, west of Buller's, 20*l.* per fathom; the 90, west of Burgess's, 25*l.* per fathom. In the 80, on the north part of the lode, the ends in the aggregate are worth 140*l.* per fathom.

Chiverton Moor, 5½ to 5¾; the mine has improved in the 65 west. Wheal Chiverton, 6¾ to 7; Chontales Gold have fluctuated from 4¾ to 5½, and leave off firmer at 5 to 5¼; Clifford Amalgamated, 7½ to 7¾; Devon Great Consols, 415 to 425; Drake Walls, 12*s.* to 14*s.* Prince of Wales have kept firm, and leave off 50*s.* to 52*s.* 6d. In the 55 cross-cut north another branch, 2 in. wide, has been intersected, ground favourable, and letting out a deal of water; the sampling today is 102 tons. East Carn Brea, 2½ to 2¾; East Lovell, 8 to 8½; East Russell, 1¾ to 2; Frontino and Bolivia, 13*s.* 6d. to 14*s.* 6d.; Great Laxey, 18 to 19; Great South Tolgus, 12*s.* 6d. to 15*s.*; Great Wheal Vor, 17½ to 18½; Herodsfoot, 36 to 38; North Chiverton, 4 to 4½; North Crofty, 3¾ to 4. Wheal Buller, 23 to 25: the various points in operation here are valued in the aggregate at 194*l.* per fm.; this mine ought to make good profits, and take a better position. Wheal Grenville, notwithstanding the lode in the 100 west continues worth 70*l.* per fm., declined to 20*s.*, 25*s.*, but leave off 23*s.* to 25*s.*; the agent is sanguine as to intersecting the same bunch of tin in the 90 and 110. Marke Valley, 5¾ to 6; the ends on the Rosedown lode are worth 14 tons of copper ore per fm.; the cross-cut from the 100, on Marke's lode, has been driven north to the point where Rosedown lode was expected to be met with, but it has not been seen, and the cross-cut suspended for a time. North Treskerby, 33*s.* to 35*s.*; Prosper United, 2¾ to 3; Providence Mines, 29 to 31.

East Grenville, 2¼ to 2½; driving has been commenced in both ends in the 110; the west end is 20 in. wide, with a promising appearance. South Caradon, 380 to 400; South Condurrow, 10*s.* to 12*s.* 6d.; South Frances, 37½ to 40; Tincroft, 13 to 14; West Seton, 150 to 160; West Wheal Kitty, 12*s.* to 14*s.* Wheal Basset shares have advanced to 80, 85. Wheal Crebor, 6*s.* to 8*s.*; Wheal Mary Ann, 16½ to 17½; Wheal Seton, 102½ to 107½. East Wheal Basset, 16 to 18; at the meeting, held on Tuesday, the accounts showed a balance against the adventurers of 477*l.* 16*s.* 7d., which was carried forward to the debit of next account. The loss on two months' working was 397*l.* 2*s.* 4d. The tribute pitches for tin and copper are reported as having improved since last meeting. West Great Work, 3¼ to 3¾. Great Retallack shares have been flatter, at 3¾ to 4, but leave off better, at 4 to 4¼. The mine is looking better than when last reported, and the agent hopes in his next to announce some improvement.

The market for Mining Shares on the Stock Exchange during the week has been moderately active. Don Pedro shares have rallied to 2 prem. Chontales shares have been firm at the reduced quotations. Central Americans have been enquired for. Pestarenas are firmer. Frontinos, after advancing to 17*s.* 6d. per share, have receded to 12*s.* 6d., 15*s.* St. John del Rey shares are in demand at 60*l.* West Chivertons, Great Laxeys, Great Wheal Vors, and North Croftys have been dealt in to some extent. The 204 fm. level in Great Wheal Vor has much improved. North Crofty is favourably reported on. At North Chiverton they have commenced sinking below the 80 fm. level; a very fine lode has been passed through in the 80 fm. level for 100 fms. long, which augurs favourably for the next level. West Chiverton is looking better than at any former period; the bottom level is turning up very rich. Chiverton Moor has a good improvement in the lode in the 65, west of the engine-shaft. Maes-y-Safn shares are enquired for; the mine would appear to be a great success. In Westminster the lode in the 80, or bottom level, has improved to 15 cwts. per fathom, both east and west, and in the eastern end is fast approaching the rich runs in the level above.

THE KIRKHAM AND CASTLE HOWARD IRON COMPANY, to the projected formation of which reference was made in the *Mining Journal* of Sept. 14, has now issued its prospectus. The capital has been fixed at 60,000*l.*, in shares of 20*l.* each, and several influential local gentlemen, including Mr. H. F. Beaumont, M.P., of Boothby Hall, and Mr. E. Clough Taylor, of Kirkham Abbey, have been appointed provisional directors. Smelting operations in North Yorkshire have hitherto been productive of large profits; and, as the properties of the present company are very extensive, comprising an area of 2654 acres, yielding all the ores and fluxes necessary for manufacturing a first-class iron, and are held for long terms at very low royalty—5d. per 22½ cwts. for ironstone, for example—every confidence is felt that the enterprise will prove commercially remunerative. Mr. John Abbott, of Whitby, has been appointed mining engineer; the office of consulting engineer has been accepted by Mr. J. G. Beckton, C.E.; and Messrs. Jackson, Wilson, and Jackson, of Malton, are the solicitors. The Cleveland iron trade statistics for the six months ending June 30 showed that the make of the district was 83,175 tons in excess of the previous half-year, and that the demand carried off the whole of this extra production, with the exception of 8000 tons. The abridged prospectus will be found in another column.

The Railway Companies Act of last session enables the EAST LONDON RAILWAY COMPANY to free themselves from the embarrassments caused by scripholders, who, though 76,000*l.* has been paid on their scrip, had declined to become shareholders, and thus keep the company in temporary want of funds, urgently needed for works that had been pushed forward almost to completion. No less than 76,000*l.* has been paid on this scrip, now to be converted into shares on terms so liberal that there is little doubt the whole 23,000 shares, to be dealt with will be eagerly taken up. Each share of 20*l.* is proffered at a discount of 11*l.*; by paying 9*l.* the subscriber obtains a share on which 11*l.* is considered to have been already paid. Further, on paying the 9*l.* down a further discount of 5 per cent. per annum is allowed, so that with the discount for pre-payment, and the reduced price of the share, a return of 14 per cent. on the outlay may be confidently looked for. A main section of the line will be at work some time in June next, and the design of the Thames Tunnel will at last be fully perfected, and a stream of both passenger and heavy traffic be passing from one shore to the other by this sub-aqueous route. The line, we understand, may be expected to be open from its starting point near New Cross, where it joins the great lines leading to the South Coast, through the Thames Tunnel, to a station at Wapping, near the London Docks, by the time just mentioned. The next step will be to a station at Whitechapel, and thence the line will proceed to the Great City Central Terminus in Broad-street. Other small extensions will bring the East London into union with every main route out of London to all quarters of the kingdom. The Thames Tunnel has been

purchased for a third of its cost, and the whole line will not exceed 300,000*l.* per mile, which is much less than the cost of any other metropolitan line. The shareholders are allowed till Oct. 1 to exercise their option of taking the shares now offered. The general public will be looking anxiously to know whether any residue is left to their competition.

At Truro Ticketing, on Thursday, 2030 tons of ore were sold, realising 12,372*l.* 15s. The particulars of the sale were:—Average standard, 104*l.* 7s.; average produce, 8½; average price per ton, 6*l.* 2s. 0d.; quantity of fine copper, 172 tons 1 cwt. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Aug. 29....	1686	£105 7 0	8	£5 13 6	14s. 2½d....	£71 2 0
Sept. 5....	2434	106 9 0	8	6 2 0	14 4	71 15 6
„ 12....	1284	116 19 0	5¾	3 18 6	13 9	68 15 0
„ 19....	4000	117 19 0	6⅛	4 9 0	14 6¾	72 16 0
„ 26....	2030	104 7 0	8½	6 2 0	14 4½	71 18 0

Compared with last week's sale, the decline has been in the standard 1*l.*, and in the price per ton of ore about 5s. Compared with the corresponding sale of last month, the standard is about stationary.

The following dividends have been declared during September:—

Mine.	Per share.	Amount.
Great Laxey	£0 10 0	£7500 0 0
Devon Great Consols	7 0 0	7168 0 0
South Caradon	6 0 0	3072 0 0
Maes-y-Safn	1 0 0	3000 0 0
Great Wheal Vor	0 7 6	2215 10 0
Wheal Mary Ann	0 15 0	768 0 0
East Pool	5 0 0	640 0 0
South Wheal Frances	1 0 0	496 0 0
Ding Dong	0 10 0	328 0 0
Summer Hill	0 5 0	127 0 0
Linares	0 5 0	3750 0 0
Fortuna	0 2 0	2500 0 0
Alamillos	0 1 0	1750 0 0
Total		£33,314 10 0

At South Caradon Mine meeting, on Tuesday (Mr. Peter Clymo in the chair), the accounts showed a credit balance of 6115*l.* 9s. 4d. The profit on the two months operations was 3004*l.* 4s. A dividend of 3072*l.* (6*l.* per share) was declared, leaving a balance of 3043*l.* 9s. 4d. to be carried forward to the credit of the next account. The report of the manager (Mr. Peter Clymo) stated that the mine was still looking very well, and likely to continue.

At Wheal Jane meeting, on Sept. 16, the accounts showed a profit on the four months of 1204*l.*

At the East Basset meeting, on Tuesday, the accounts showed a debit balance of 477*l.*

At Copper Hill Mine meeting, on Tuesday, the accounts showed a loss on the four months' working of 162*l.* The debit balance was 528*l.* The report is more encouraging than for some time past. The returns are now paying the costs, and the agents hope at least to continue to do so for the future.

At Rosewarne United Mines meeting, on Wednesday, the accounts showed a debit balance of 208*l.* 6s. No call was made. The estimated value of the sampling on Tuesday for the ensuing account (computed 126 tons) is 650*l.*

At the Budnick Consols Mine meeting, on Thursday, the accounts showed a credit balance of 13*l.* 3s. 3d.

At the West Wheal Damsel meeting, on September 16, the accounts showed a profit of 69*l.*, decreasing the debit balance to 302*l.*

At New Crow Hill Mine meeting, on Wednesday, the accounts showed a cash balance of 3*l.* 16s. 3d., and liabilities in excess of 381*l.* 13s. 3d. A call of 1s. per share was made.

At Spearne Consols Mine meeting, on Sept. 18, the accounts showed a debit balance of 221*l.* 10s. A call of 3*l.* 15s. per share was made. Mr. Andrew Harvey was appointed the surgeon of the mine. The next meeting, it was resolved, should be made special, for the purpose of subdividing the shares. The agent's report stated that there were ten pitches, working on tributes varying from 10s. to 18s. in 1*l.* About 66 persons were employed on the mine.

At the Craddock Moor Mine meeting, on Wednesday, the accounts showed a debit balance of 340*l.* 7s. 3d. A call of 6s. per share was declared. The agents expected to sell about 150 tons of copper ore for the next two months.

At Spearn Moor Mine meeting, on Sept. 19, the accounts showed a debit balance of 134*l.* 3s. 1d. The mine continues to produce the usual quantity of tin, and with a better price would leave a fair profit. The agents' report stated that they calculated their returns for the entering quarter would be a little less than the usual quantity, in consequence of their not having a sufficient supply of water for dressing purposes.

At the Linares Lead Mining Company (half-yearly) meeting, on Thursday (Mr. W. Cox in the chair), the accounts showed a profit upon the six months' operations of 428*l.* 11s. 5d. The dividend of 2s. per share (referred to in last week's Journal) was confirmed. Details in another column.

At the Fortuna Company (half-yearly) meeting, on Thursday (Mr. J. Morris in the chair), the accounts showed a profit on the six months' operations of 594*l.* The dividend of 2s. per share (referred to in last week's Journal) was confirmed. Details in another column.

At the Alamillos Company half-yearly meeting, on Thursday (Mr. J. P. Judd in the chair), the accounts showed a profit on the six months' operations of 2069*l.* 19s. 9d. The dividend of 1s. per share (referred to in last week's Journal) was confirmed. Details in another column.

At Peak Downs Copper Mining Company meeting, held at Sydney, New South Wales, on June 30 (Mr. B. Buchanan in the chair), the accounts for the preceding six months showed a credit balance of 24,886*l.* The directors' report stated that the operations of the company continue to progres favourably. The staff of miners has been increased by the arrival of 40 experienced men, which will enable the mining captain to raise enough ore to keep the smelting-furnaces fully employed. The copper market in England has continued in the most depressed state. The account sales received from the London agents of the company show that very low rates had to be submitted to, some large shipments having been sold lately at 7*l.* 10s. per ton. Nevertheless, these unprecedented low prices leave a small profit, and show that even at the present rates the mines could be worked with advantage to the shareholders. It is gratifying, however, to hear that at the date of the last advices from England prices had slightly improved, and that there was some hope that the next shipments would be disposed of on more favourable terms. To meet the current expenses of the mine from January to April, when hardly any copper was received, the debt to the bank had to be gradually increased. The quantity of copper now on the road is sufficient to balance the overdraft.

On the Stock Exchange Mining Shares have been dealt in to a moderate extent during the week. The following prices were officially recorded in British Mining Shares:—East Grenville, 2½; East Lovell, 8½; Great Laxey, 18½, 18¾, 18¾; South Wheal Frances, 36; West Chiverton, 65; Great Wheal Vor, 18½, 18¼; East Caradon, 5½. In Colonial and Foreign Mining Shares the prices were:—Port Phillip, 1 3-16ths, 1 5-16ths, 1¼; Cape Copper, 7; Scottish Australian, 1-16th; Chontales, 5½, 5, 5 1-16th, 4¾, 5; Don Pedro, 1¼, 1 15-16ths, prem.; St. John del Rey, 60, 59¾; Anglo-Brazilian, 9-16ths, ½, ¾; Val Sangoria, ½; United Mexican, 2; Frontino and Bolivia, 11-16ths, ¾.

THE COPPER TRADE.—Messrs. Vivian, Younger, and Bond (Sept. 27) write—The weakness noted in our last as having become apparent has been further developed this week, and holders of all kinds have shown a disposition to realise, but buyers do not come forward, even where offers might be considered tempting. The French consumers have consistently held aloof from purchasing for a long period, and as there has been no demand of any consequence on this side, prices of Chili bars have given way. Early in the week 50 tons were sold, at 77*l.* 10s., and 100 tons of Urmeneta ingots, at 78*l.*, at Swansea. Since then 50 tons of ingots have been parted with at 77*l.* There have been no transactions in West Coast ores or regulus. The mail from Chili is just delivered, bringing news to August 16. It advises charters effected during the previous fortnight of 1750 tons fine copper for England, and 370 tons for America; in all, 2100 tons. The effect is not yet apparent, but it can scarcely be otherwise than adverse in the present state of the market. No transactions worth recording have occurred either in raw English or fine foreign, and prices are rather nominal.

Sale of Shot and Shell at the Royal Arsenal, Woolwich.

NOTICE IS HEREBY GIVEN, that the SECRETARY OF STATE FOR WAR is PREPARED to RECEIVE TENDERS for the PURCHASE of STEEL SHOT and SHELL at WOOLWICH, where all information may be obtained on application to the Principal Superintendent of Stores at the Royal Arsenal.

Tenders must be made on a printed form, which may be obtained from that officer, or from the Director of Contracts, War Office, Pall Mall.

The tenders are to be delivered at the War Office, Pall Mall, S.W., on or before the 8th October, 1867, addressed to the Under Secretary of State for War, and marked on the outside "Tender for Purchase of Shot and Shell."

The Secretary of State for War reserves the right of rejecting any or all of the tenders received. T. HOWELL, Director of Contracts.
War Office, Pall Mall, S.W., Sept. 21, 1867. 60

Contract for British Iron, Class A.

CONTRACT DEPARTMENT, ADMIRALTY, SOMERSET HOUSE.

THE COMMISSIONERS for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, do hereby give notice that on TUESDAY, the 22d October next, at Two o'clock, they will be READY to TREAT with such persons as may be willing to CONTRACT for SUPPLYING and DELIVERING into store at Her Majesty's several dockyards, all such quantities of

BRITISH IRON, CLASS A,

As may from time to time be ordered under a contract for twelve calendar months certain, and further until the expiration of three calendar months' warning.

The average annual consumption for the last two years may be ascertained, and a form of the tender, including a schedule of the iron, and conditions of contract, may be obtained on application at this department.

No tender will be received after Two o'clock on the day of treaty, nor will any be noticed unless the party attends, or an agent for him duly authorised in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words "Tender for British Iron, Class A," and must also be delivered at the Department of the Storekeeper-General, Admiralty, Somerset House, accompanied by a letter signed by two responsible persons, engaging to become bound with the person tendering in the sum of £1000 for the due performance of the contract.

By order, ANTONIO BRADY,
Registrar of Contracts and Public Securities.
Contract Department, Admiralty, Somerset House, Sept. 23, 1867. 62

Sale of Engines.

CONTRACT DEPARTMENT, ADMIRALTY, SOMERSET HOUSE.

THE COMMISSIONERS for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, do hereby give notice that, on TUESDAY, the 8th October, at Two o'clock, they will be READY to RECEIVE SEALED TENDERS for the PURCHASE of several lots of

ENGINES,

taken from Her Majesty's ships Surprise, Encounter, Intrepid, Viper, Arrow, and Snake, lying in Devonport Dockyard.

Catalogues and conditions of sale may be obtained here and at Her Majesty's Dockyard at Devonport.

Persons wishing to become purchasers must apply to the Admiral Superintendent of Her Majesty's Dockyard at Devonport for notes of admission to view the same.

No tender will be received after Two o'clock on the day of treaty, nor will any be noticed unless the party attends, or an agent for him duly authorised in writing to make a deposit of £25 per cent. on the amount of the tender.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words "Tender for Engines," and must also be delivered at the Department of the Storekeeper-General, Admiralty, Somerset House.

By order, ANTONIO BRADY,
Registrar of Contracts and Public Securities.
Contract Department, Admiralty, Somerset House, Sept. 20, 1867. 64

Contracts for Coals for Singapore.

CONTRACT DEPARTMENT, ADMIRALTY, SOMERSET HOUSE.

THE COMMISSIONERS for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, do hereby give notice that on TUESDAY, the 15th October next, at Two o'clock, they will be READY to TREAT with such persons as may be willing to CONTRACT for SUPPLYING and DELIVERING into store at Singapore,

THREE THOUSAND TONS OF SMOKELESS SOUTH WALES COALS,

Fit for the service of Her Majesty's steam-ships and vessels. One-half of the coals to be shipped by the 31st Oct., and the remainder by the 30th Nov., 1867.

A form of the tender and conditions of contract may be seen in the lobby of the Storekeeper-General's Department, Admiralty, Somerset House. No tender will be received after Two o' clock on the day of treaty, nor will any be noticed unless the party attends, or an agent for him duly authorised in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words "Tender for Coals for Singapore," and must also be delivered at the Department of the Storekeeper-General, Admiralty, Somerset House, accompanied by a letter signed by two responsible persons, engaging to become bound with the person tendering in the sum of £25 per cent. on the value for the due performance of the contract.

By order, ANTONIO BRADY,
Registrar of Contracts and Public Securities.
Contract Department, Admiralty, Somerset House, Sept. 24, 1867. 65

Contract for British Iron.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL.

NOTICE IS HEREBY GIVEN that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY on or before Monday, the 30th instant, to RECEIVE PROPOSALS, in writing, sealed up, from such persons as may be willing to SUPPLY

BEST BRITISH IRON,

And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M. of the said 30th September, 1867, after which hour no tender will be received. GERALD C. TALBOT, Director-General.
India Office, Sept. 23, 1867. 63

LEAD ORES.

Date.	Mines.	Tons.	Amount.	Purchasers.
Sept. 19—	Whitewell	60	£11 16 6	Walker, Parker, & Co.
—	ditto	20	8 10 0	Burry Port Company.
20—	Great Laxey	100	22 11 0	ditto
23—	East Logylas	65	12 1 0	Panther Company.
—	Glogfach	65	17 16 0	ditto
—	Cwmystwith	75	11 18 6	Walker, Parker, & Co.
—	Cefn Brwyno	22	11 14 0	Weston & Collinborn.
25—	Dylife	47½	12 11 6	Walker, Parker, & Co.
—	ditto	47½	12 11 6	A. Eyton.
—	ditto	52	12 9 6	ditto
26—	Trewetha	48	24 5 6	Treffry's Trustees.
—	ditto	13½	14 11 6	Michell and Son.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 25—	Cargoll	40	£ 5 5 0	Vivian and Sons.
—	ditto	72	3 7 0	ditto
—	ditto	21	2 8 0	ditto

BLACK TIN.

Date.	Mines.	Ts.	c.	q.	lbs.	Price p. ton.	Amount.	Purchasers.
Sept. 21—	Penhalls	12	12	1	3	—	£ 693 15 2	—
—	Wheal Uny	8	10	0	26	—	444 0 4	—
—	Pendeen Cons.	2	4	0	10	£ 51 5 0	112 19 6	Bolitho.

ARGENTIFEROUS COPPER PYRITES.

Date.	Mines.	Tons.	Amount.	Purchasers.
Sept. 24—	Isle of Man Mining Co.	5½	£34 12 0	Vivian and Son.

COPPER ORES.

Sampled Sept. 11, and sold at the Royal Hotel, Truro, Sept. 26.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Clifford Amalgamated	93 ..	£1 10 0	North Treskerby	57	£6 2 0
ditto	90	8 3 0	ditto	48	5 2 0
ditto	80	4 19 6	Wheal Rose	75	7 3 0
ditto	70	4 9 6	ditto	65	7 3 6
ditto	49	2 6 6	ditto	62	4 18 6
ditto	48	2 19 6	ditto	48	5 13 6
ditto	24	2 10 6	Phœnix	67	3 3 0
ditto	14	3 3 6	ditto	65	3 8 6
South Caradon	94	4 16 6	ditto	18	7 15 0
ditto	66	7 3 6	ditto	4	25 19 0
ditto	60	1 10 6	Craddock Moor	97	4 13 6
ditto	44	13 4 6	ditto	36	7 18 0
ditto	40	19 5 6	ditto	16	2 3 6
ditto	38	8 8 6	Glasgow Caradon	59	3 3 0
ditto	33	19 17 6	ditto	50	3 18 6
ditto	32	19 10 6	ditto	20	4 0 6
ditto	31	2 4 0	West Caradon	61	6 15 6
North Treskerby	78	4 18 0	ditto	52	4 3 6
ditto	68	4 14 0	ditto	10	2 7 0
ditto	59	6 4 0	Tywarnhaile	9	2 8 0

TOTAL PRODUCE.

Clifford Amalgam	468	£1946 0 6	Craddock Moor ..	149	£ 772 13 6
South Caradon ..	438	4598 10 6	Glasgow Caradon.	129	462 12 0
North Treskerby.	310	1660 2 0	West Caradon....	123	653 17 6
Wheal Rose.....	250	1580 7 6	Tywarnhaile	9	21 12 0
Phœnix.....	154	676 19 6			

Average Standard ..... £104 7 0 | Average Produce 8½
Average Price per ton £6 2 0
Quantity of Ore ..... 2030 tons | Quantity of Fine Copper, 172 tons 1 cwt.
Amount of Money £12,372 15 0
LAST SALE.—Average Standard..... £118 0 0.—Average Produce.....6⅛
Standard of corresponding sale last month, £105 7 0.—Produce, 8.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	226	£1860 16 9
Freeman and Co.	116⅔	637 10 6
Grenfell and Sons	273	2174 17 6
Sims, Willyams, and Co.	426	2600 13 9
Williams, Foster, and Co.	240¾	1213 15 0
Mason and Elkington	310	1660 2 0
Bankart and Sons	250	1580 7 6
Copper Miners' Company	109⅔	400 9 0
Swetland, Tuttle, and Co.	70	226 15 0
Goole Alum Smelting Company (Limited)	8	17 8 0
Total	2030	£12,372 15 0

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday next.—Mines and Parcels.—Wheal Seton and Pendarves 891—Clifford Amalgamated 638—West Seton 547—South Crofty 376—West Tolgus 321—East Pool 128—Wheal Basset 123—Carn Camborne 90—Dolcoath 43—East Basset 20—South Tolgus 13—Tolcarne 10.—Total, 3200 tons.

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday week.—Mines and Parcels.—Prosper United 430—Carn Brea 261—East Carn Brea 182—Par Consols 180—Great South Tolgus 156—Rosewarne United 126—North Downs 91—Crenver and Abraham 84—Botallack 75—Old Pembroke 55—Mellanear 29—South Dolcoath 25—Bullehole's Ore 17—Rosewarne Consols 16—Huthnance's Ore 10=1737 tons.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt: it then forms an accumulating useful work of reference.

SILVER VEIN.—If the "Shareholder" who wrote in last week's Journal has taken the usual course of applying to the secretary of the company every information would have been afforded him.

WHEAL TREVENNA.—In reply to the remarks of Mr. W. H. Willcock, the manager of this mine, in last week's Journal, who states that the directors have discharged me, but does not rightly say what it is for, I was surprised to see Mr. W. H. Willcock's name appear, as I have neither seen or heard from him since February last, when he had the trial in London with Capt. James Brad of Bodmin. Mr. W. H. Willcock does not say I am discharged because I did by the request of the shareholders, attend a meeting held at the Brunswick Hotel, Manchester, on Aug. 19, to enquire into different things that had transpired respecting the paid agents of the mine; but, as at the general meeting it is intended to have the books investigated, it will then be seen who is right and who is wrong.—THOMAS JENNINGS.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, SEPTEMBER 28, 1867.

IRON-MAKING IN FRANCE AND IN ENGLAND.

No one who has seen the specimens of iron placed in the Paris Exhibition, by Sir JOHN BROWN on the one part, and by Messrs. PETIN and GAUDET on the other, will deny that our neighbours on the other side of the Channel are advancing rapidly in the manufacture of wrought-iron. That large French plate in the naval shed with a shot sticking in it, is eloquent to every person who is interested in the British iron trade. There can be no doubt that even the two nations are racing to obtain the best ships, so the leading ironmasters of the two countries are competing with equal ardour. But on this side the competition has but just commenced in England in earnest. The rivalry has been brought about in great part by the belligerent preparations of the present ruler of the French nation, but though it commenced under a warlike *regime*, its continuance will eventually serve the arts of peace. Mr. I. LOWTHIAN BELL, of Newcastle, in his paper "On the Present State of the Manufacture of Iron in Britain, and its Position as Compared with that of some other Countries," read by him before the British Association, a resume of which we gave in the Supplement to last week's Journal, has gone thoroughly into the matter, and has shown that, "favoured as we undoubtedly are by Nature, there seems nothing wanting for our success in this noble branch of manufacturing science than a continuance of that still unflagging spirit of enterprise on the part of the masters, and the exercise of that operative skill on the side of our workmen, which is still unsurpassed in any iron-producing country of Europe; but that in this alliance a correct knowledge by both of the competition we have to meet, and a thorough belief in the inseparable union of the interests of each is indispensable."

The extent to which Nature has favoured us, in comparison with our rivals, is seen chiefly in that which forms our great strength as iron manufacturers. It is seen in "those incomparable fields of coal which constitute so important a feature in our mineral wealth." The advantages thus secured Mr. BELL is very sanguine will, notwithstanding present difficulties, maintain the iron trade among the most prominent of our national branches of commerce. This conclusion is arrived at from a consideration of the various circumstances connected with the use of coal, and the means possessed by different nations for satisfying the constantly increasing demands this use creates. In Great Britain, it is pretty well known we raise annually about 100,000,000 tons of this mineral. Of this quantity 10,000,000 tons are exported, and about 20,000,000 tons is devoted to the use of our iron works, thus leaving 70,000,000 tons for consumption in other descriptions of manufactories, purposes of locomotion, and for domestic use. In France and Belgium together, Mr. BELL goes on to remind us, less than one-fourth of our own production is obtained, and that only by great exertions being made to obtain the largest possible quantity the mines are capable of affording. Thus it will be seen that, after satisfying the requirements of the ironworks of these two countries, not much over 15,000,000 tons would remain for carrying on those operations in which, with a smaller population, we are consuming 70,000,000 tons. The disadvantage to the continental maker which is shown in these mineral statistics will be apparent to every ironmaster who calls to mind the fact, noted also by Mr. BELL, that the production of an iron railway bar requires 5 or 6 tons of coal for its manufacture; and it will become conspicuous when we remember that nearly 12 tons of coal were required to produce every one of the 21 tons of iron of which the monster armour-plate, recently rolled by Sir JOHN BROWN, was made up. Our rivals are displaying great energy and much ingenuity in endeavouring to surmount this the great obstacle, by encouraging the use of fuel in ways we in this country have been wise enough in all requisite cases to imitate. We allude to the washing and coking of small coal; the cementing of small coal; the use of coke ovens to collect the distilled tar and ammonia; the passing of the flames from the puddling and balling furnaces to the steam-boilers; and last, but perhaps most important of all, the bringing down of the waste flames from the blast-furnace for the heating of the blast.

This brings us to the *Spirit of Enterprise*, with the continuance of which Mr. BELL rightly associates our future success. In the matter of blast-furnace gases, considerable improvement has been made upon the continental methods, and there is now saved every year in the Cleveland district alone no smaller a quantity of fuel than 500,000 tons by the methods adopted to this end by the masters there. The blast-furnace proprietors of Durham and North Yorkshire, too, have within the last four years introduced such alterations in the construction of their furnaces as to raise the temperature of the blast they employ to a point never contemplated by NIELSON himself, and have thereby effected a further saving of coal. Then our rolling-mill engineers have kept pace with the constantly increasing requirements for malleable iron of large dimensions. Mr. BELL reminds us that it is to Mr. GEORGE GRANT SANDERSON, who has been for upwards of 20 years the general manager of the Parkgate Ironworks, near Rotherham, that we owe the idea of rolled armour-plates; and that to the owners of that establishment is due the merit of having in the same year (1855) provided a mill and rolled the plating for a third floating battery, built by Messrs. PALMER, on the Tyne. Manufacturers of this description of iron, by increasing the powers of their heating furnace-mills, and other appliances, are now able to supply our naval yards and military establishments with materials still more invulnerable than that formerly deemed sufficient as a means of defence. We said that this spirit of enterprise which we termed competition had only just commenced on this side of the Channel in English earnest; and the Paris Exhibition will help to put us upon our metal. But, distinct from that consideration, we hold that the ironmasters of this country are proving equal to every requirement that is made of them by the artillerists and the civil engineers. The battle of the guns has left the victory at present with the ironmasters of Great Britain, and Sir JOHN BROWN has just produced what has been described as "one of the finest, thickest, and heaviest armour-plates rolled in the world." His armour-plate in the Exhibition weighs 11¼ tons, but this, it will be remembered, weighed in the rough over 21 tons. The armour-plates of Sir JOHN BROWN and Co. have obtained "a renown" which stands foremost throughout the world for this branch of manufacture. Even the French Government themselves have had many of their plates made at the Atlas Works, and 8-in. plates are now being made there to coat the largest frigate in the world, which is being built at the Thames Iron works for the Prussian Government. Sir JOHN BROWN graduated increased the capability of his works, rising from smaller dimensions up to 8-in., thence progressing to 9, 10, and 10½-in. plates. Afterwards, some few 12-in. were turned out, and now we have the 15-in. solid plate in one mass of 21 tons.

We have dwelt upon the armour-plate department of the trade

cause it is herein that the comparisons are usually instituted, but we contend that in the lighter, and commercially more important, departments we are not being distanced by our rivals in all that relates to serviceable samples. There are fancy specimens exhibited by the French makers in the Exhibition, and particularly girders. These the Frenchmen have been able to turn out by the "forge Anglaise," with which we have supplied them, and we too could produce such girders if need were. As we some time ago remarked in the Journal, the English ironmaster is too practical a man to expend money and time in an idea; and scarcely more than the development of an idea would seem to be furnished in the girders exhibited, for example, by M. FORGES, of Commentry. These girders Mr. JOHN FERNIE, of Leeds, in his paper "On the Iron and Steel of the Paris Exhibition," read at the British Association, said he believed had been made "for going beyond the English people, and not so much for their practical value—in short, to excel the English in this respect;" indeed, they were mere *tours de force*. Our work in England is of a more solid and every-day character than to permit us to spend our energies upon rivalry of that class. Our market is the world, and inasmuch as iron is what FRANCIS HORNER has described as "the soul of every other manufacture, and the mainspring of civilised society," whilst we do not forget to attend to quality we must produce quantity also. Our annual blast-furnace output is 4½ million tons, a quantity with which that produced by the collective power of every other European nation would appear ludicrously small; inasmuch, however, as theirs is smelted from the purest and rarest known ores, and in respect of much of it with charcoal for fuel, it must be looked for that quality for quality in the aggregate quantities smelted their pigs are superior; but, as Mr. BELL states, it "cannot be sold at much under double the price of our most esteemed brands." Still, quantity for quantity, we can supply a superior article at much less money, if quality alone were all that is required. Well then may Mr. BELL "unhesitatingly advance the opinion that no evidence whatever is to be found" in the Paris Exhibition, "that this country occupied a position less conspicuous for the excellence of its products than other nations."

The *Operative Skill* which Mr. BELL regards as also necessary to our future prosperity, and which, as at present existing, it should encourage our workmen to know, Mr. BELL, after much consideration, believes "is still unsurpassed in any iron-producing country of Europe," we have confidence enough in our mill and forge hands to believe will become increasingly conspicuous. Heavily weighed as they have long been by Union trammels, we do expect that the really valuable men will shake off the lazy and the incompetent who are hanging upon them, and, believing in the power of mental education and mechanical skill to secure a good livelihood to every handicraftman in England who will work, tell these parasites to—Go work, and not spout. At no time was labour either better paid, or was there a stronger determination on the part of the employers to "make things comfortable" for the men. We invoke the men to keep this in mind, and not to do such violence to their improved and improving education, as to heed the assertions of men who pit capital and labour against each other as sworn enemies, instead of being what they really are—natural allies. Let them not forget that whilst they are getting from 20 to 30 per cent. higher wages than the men in the continental ironworks, with the cost of living equal, still "there is not one department, from rolling the finest wire-iron and the thinnest tin-plates or hoops, to the turning out of the largest rails or the heaviest amour-plating, in which these operations are not performed quite as well by foreign labour as by the most expert rollers in the best mills in this country." Mr. BELL evidently uses studied words when he says that our operative skill is "unsurpassed." If on this side the competition on the part of the masters has only just begun in English earnest, may we not hope that the same may be true of the men on this side? The continental workmen have attained to the skill which they now display under circumstances in which all such Unionism as has hampered the British workman has been impossible.

This fact is placed beyond controversy by the Blue Book just issued, with the title of "Correspondence with Her Majesty's Missions Abroad regarding Industrial Questions and Trades Unions." Therein it is shown that "in no country do associations exist resembling nearly the Trades Unions of England;" though, inspired we fear by the English Unionists, the Lausanne Congress would show the existence of an attempt to spread disaffection upon the Continent. Hitherto the workmen there have combined with their masters in bringing about a state of things which, in our opinion, would have had no existence but for the antagonism which labour has shown to capital in this country. English operatives must not delude themselves with the notion that their Unions had brought about any improvement in their condition. A plea on their behalf has just been issued under the joint authorship of Mr. MALCOLM LUDLOW and Mr. LLOYD JONES, one of their order. Its design seems to be to show how greatly the working class has advanced in wealth, in intelligence, and in general prosperity since 1832. Mr. LUDLOW, it has been remarked, "has told us of the enormous improvement that has been made in the condition of the working class by outside legislation, and he has failed utterly to prove that the trades, through their societies, have had any part in bringing about this improvement." The operatives point to Prussia, as affording an example to this country to be followed. We, too, point to Prussia. Existing in that country they will find not leagues of labour against capital, but associations which, in the words of Mr. MORIER, the British representative at Berlin, "from the foundation to the coping-stone of the edifice, rest on the principle of self-help, self-dependence, and self-reliance; find no room for dictatorial powers, no scope for the terrorism of majorities, but combine the utmost variety and harmony." These Prussians have "a thorough belief in the inseparable union of the interests of each," being "indispensable." Let our British ironworkers believe in it, and act upon it, and we shall as effectually "beat the French" in the battle for supremacy in commerce as our forefathers beat them when they contested our supremacy on the seas.

"KING IRON."

Little did those ironmasters of Sussex who were gathered to their fathers in the middle of the seventeenth century, and whose cast-iron monumental slabs literally pave the interior of Wadhurst Church, imagine that in the middle of the nineteenth century that remote part of Lancashire bearing the name of Furness, and known in those days by little more than its Abbey—this "Lancashire over the Sands," as it used to be called—would be the spot upon which the king, whom they served, would receive homage from an assembly "exceeding 1100 in number, comprising, perhaps, the most complete representative assembly of trading and railway interests in all parts of the kingdom that has ever been assembled even in England."

It was Mr. GLADSTONE who impersonated the craft of the Sussex worthies, and dubbed it with a monarch's title. This he did when he was taking a very conspicuous part in the enthroning of the monarch in his piece of new territory. He said—"We have heard a great deal at different times about King Cotton as king in England, and far be it from me to say anything against his majesty King Cotton, to whom I wish to be entirely loyal; but although they could not get on with two kings in Brentford, yet of this class and character there are two kings in England. There is a King Iron as well as a King Cotton; and I think in every sense, as Englishmen, we must rejoice that, in these latter years especially, King Iron has arisen up out of the bowels of the earth to assert his claim to a share in the sovereignty. His fate has been a very singular one." The ex-Chancellor of the Exchequer proceeded in a very interesting vein to show how in the earlier ages of the world iron was ten times dearer than copper, but was now only one-tenth the price of that metal, not because copper was scarcer, but because the gigantic strides with which iron has asserted itself, and has become by far the most useful and valuable of all the metals which the earth—perhaps more useful and necessary than all the others put together—has effected this extraordinary change. This change he regarded as of particular interest to Englishmen, because the more "the use of iron advances, the more the power of England advances."

Such views, expressed by such a man, upon such an occasion, must have been extremely gratifying to the very large number of ironmasters who listened to the speaker. Those gentlemen had been gathered together from all parts of the kingdom, the hospitality of the Furness Railway Company being only little short of princely, for not only had they invited those gentlemen, but they had have sent them railway tickets to free them to and fro. They would also listen with much interest to Mr. GLADSTONE'S allusion to the removal of the iron trade from one part of the kingdom to the other; and it was the remarks he made upon that subject which recalled our memory to Wadhurst Church. His remarks were, "We have not seen, but our fathers have seen, the iron trade which dwelt in the southern and south-eastern counties of England, finding a home in the centre, in the North, in Scotland, and in Wales." And he reminded his auditors that this change of home did not now result in the inflicting of a serious calamity on particular places, because chiefly of the facilities of intercommunication between all parts of the kingdom. His observations upon this point are well worthy of preservation, they were—

"The result is the cheapening of commodities, the stimulating of invention, the throwing of other places back upon their resources, teaching them to study how they can avoid the waste which a too great a plenty of natural gifts and treasures may have encouraged, as has undoubtedly been the case in some of the mining districts of England; and in this way we find that multiplications of these points and centres of production, instead of acting unfavourably, rather supplies a beneficial stimulus to the energies and ends, even in the increased property of those very centres of productions with which at first sight they seemed likely to compete."

Not even Mr. I. LOWTHIAN BELL, who was fitly chosen to reply to the toast of "The Iron Trade," could have more accurately sketched in general terms the effect of such discoveries as have been made at Barrow upon other ironmaking districts. Instancing the most distant (from Barrow) of the old ironmaking districts now existing in England—Where, the men of Barrow might ask, would South Staffordshire's ability have been to compete in the production of good iron at the present day, at a saleable price, but for "Lancashire over the Sands," and for Middlesbro'? Between the last-named place and Barrow Mr. GLADSTONE instituted a comparison in respect of the rapidity with which they had sprung into commercial importance. "Until this day," he said, "I should always have quoted the town of Middlesbro' as by far the most extraordinary example of rapid material and commercial progress that the whole length and breadth of this island could exhibit; but even Middlesbro' itself has been slow in its advances compared with Barrow." Yet Middlesbro', the metropolis of the Cleveland district, will not envy Barrow, any more than will the more distant Wolverhampton, the metropolis of the South Staffordshire district. The poorer irons of Cleveland will be in larger demand, by reason of the existence of the richer qualities that are extracted from the remarkably pure red oxides of iron that are found in pockets in the mountain limestone of the hematite districts of South Cumberland. Indeed, even though the expectations of the warmest friends of the Barrow district may be realised, and the new port become a rival to Liverpool, whilst those of the inhabitants of Middlesbro' may be attained, and that place become a Birmingham, it does not follow, as has been correctly observed, that either the Mersey or the Tees will suffer from the diversion of traffic to Barrow. It is claimed for Cleveland, and with much show of reason, that in the production of cheap pig-iron, though there are certain makers in South Staffordshire who are prepared to question the fact, "Cleveland stands unrivalled," and that "it is hardly possible to imagine a combination of circumstances which could enable any other locality to surpass it in this respect."

The two districts in their youth are eminently characteristic of the Old Country, and of the requirements that are made of us. Elsewhere we have said that England's market for iron is the world, and that we have, therefore, to supply both bulk and quality. Barrow and Middlesbro' are an epitome of our capability in this respect. If the customers ask cheap rails then Middlesbro' will supply them, but if they demand best steel rails, and have the money to pay for them, then Barrow will supply them with all that they need. When Mr. GLADSTONE paid homage to King Iron at Barrow, he might well have handed over the little island to the joint sovereignty of that monarch and a cousin-german of his, whom he might well have dignified with the title of King Steel, for if that royal personage has not yet begun to reign there, he is certainly heir apparent to the throne of Barrow. It is the growing demand for steel, to which the Bessemer process has given an impetus, that has invested Barrow with much of its importance, and at that place we are reminded will be the largest Bessemer steel factory in the world. Those of the company who had been to Paris, and had seen those much-admired steel castings of Rhenish Prussia, which had caused so much interest and curiosity, both by their extraordinary sizes and qualities, and by the secrecy and mystification that surrounded their manufacture, would as they observed the operations at Barrow in the turning out of rails, tyres, and axles by the Bessemer principle, if their faith in England as an iron and steel-producing country had by what they saw in Paris been shaken, here have it restored, and would no longer doubt our supremacy in that department of commerce for all practical purposes.

Mr. BELL, we have shown, was at Barrow, and with him were Mr. JOHN LANCASTER, of the Wigan Coal and Iron Company, who accompanied that gentleman upon the Continent before he drew up the paper which was reviewed in the Supplement to last week's Journal; Mr. JOHN FERNIE, of Leeds; and Mr. FERDINAND KOHN, of London, all of whom, practical and clever men, concur in the conclusion that the vague notion now existing in some quarters that the superiority and predominance of British iron manufacture had ceased to exist, or was threatened to be overthrown by continental competitors, had no foundation, judging even by the state of things in the Paris Exhibition. The main cause of the great industrial revolution in the department of commerce we have been noticing is the Bessemer process. It is a costly one; yet during the 11 years of its existence has made surprising advances. Happily it found the joint-stock principle in operation, and has, therefore, been fostered by combined wealth. On behalf of the great mass of consumers, and of the trade, we hope that a much less costly method will soon be in practice by its side. The readers of the Journal will have perceived the looming of some such principle. If it should succeed, perhaps Middlesbro' too may roll cheap steel as well as cheap iron rails. But even such "a consummation, most devoutly to be wished," will not prevent the new docks at Barrow from contributing immensely to the development of South Cumberland. To that port we trust may be applicable the words used by the late PRINCE CONSORT, when in April, 1849, he laid the first stone of the Great Grimsby Docks. His Royal Highness said: "We have been laying the foundation stone not only of a dock as a place of refuge, safety, and refitment for mercantile shipping, and calculated even to receive the largest steamers in Her MAJESTY'S navy, but it may be, and I hope it will be, the foundation of a great commercial port, destined in after times, when we shall long have quitted this scene, and when our names even may have been forgotten, to form another centre of life to the vast and ever-increasing commerce of the world."

GOLD AMALGAMATION—SODIUM SUPERSEDED.—The value of sodium amalgam has been thoroughly tested in the Pacific States of America, and better results have been obtained with it there than in any other mining district, yet it is now found that its can be entirely dispensed with by the substitution of a well-known and much cheaper chemical compound—cyanide of potassium. It has always been considered that sodium amalgam owed its value to its power to attack and decompose the oxides of many of the metals, and it is now found that cyanide of potassium possesses the same property. It has been successfully used both on copper plates and in the pans. The plates are first cleaned with sand and nitric acid, and well washed in cold water. The surface is then swabbed over with the cyanide solution, and the mercury applied immediately, and rubbed on well; the plates will thus get a highly sensitive coating of mercury, which will sieze upon the gold as it passes over them. In the pans the cyanide solution is applied with each charge of mercury, the proportion being varied to suit the ore operated upon.

RAILWAY IRON.—The value of the railway iron exported in the ten years ending 1866 was as follows:—1857, 4,000,515*l.*; 1858, 3,565,224*l.*; 1859, 4,124,208*l.*; 1860, 3,408,759*l.*; 1861, 2,906,359*l.*; 1862, 2,817,877*l.*; 1863, 3,278,304*l.*; 1864, 3,305,086*l.*; 1865, 3,550,563*l.*; and 1866, 4,166,419*l.* The quantities represented by these sums were as annexed:—1857, 457,660 tons; 1858, 433,250 tons; 1859, 528,927 tons; 1860, 453,445 tons; 1861, 377,565 tons; 1862, 400,765 tons; 1863, 446,440 tons; 1864, 408,215 tons; 1865, 434,300 tons; and 1866, 498,595 tons. It will be seen that the value of the railway iron exported in 1866 was larger than in any former year; the quantity was, however, somewhat below the mark of 1859. The exports were largely increased all through the decade by the demand on account of the Indian guaranteed railways, and last year they were still further augmented by the demand on American account. It cannot be said, however, that this branch of the export iron trade is making much progress. The total exports to July 31 this year amounted to 318,028 tons, as compared with 312,732 tons in the corresponding seven months of 1866, and 224,102 tons in the corresponding seven months of 1866.

REPORT FROM SCOTLAND.

SEPT. 24.—The Pig-Iron Market has been steady since my last, with a considerable business done at the close of last week, but the demand has since become more limited. The shipments, which were principally to the Baltic and other northern ports, were good, being 15,525 tons, against 10,935 tons the same week last year; this makes the total shipments for the year to date 470,125 tons, against 427,230 tons in the corresponding period of 1866, showing the large increase of 42,895 tons on the 8½ months past. We had another lifeless market to-day, and the few sales made were at rather lower rates—54s. 3d. cash, closing at this quotation sellers—buyers, 54s. 3d., fourteen days; Gartsherrie, 62s.; Coltness, 61s. 9d.; Glengarnock, 60s. No. 1, g.m.b., 55s. 3d.; No. 3, 54s. The manufacturers of Bar-Iron keep well employed, and second-class makers are hopeful that before long they will be able to advance their prices 2s. 6d. a ton—in fact, we hear of one or two houses, pressed for immediate delivery, who have already raised their quotations, but it is only, in cases, to save merchants from having their orders short-shipped. Shipbuilding iron, though more enquired for, is only in limited demand at lowest quotations. Founders of Pipes are busy, but general work and miscellaneous castings are scarcely to be had.

The Coal Trade is very fair for the season, the shipments of the week having reached 28,070 tons, against only 23,850 tons the same week last year. The prices, though maintained, are not hardening, and steam coal may be had at from 7s. to 10s. a ton. Gas coal, ordinary, 12s. 6d., up to 30s. for best; Boghead Cannel, 60s. to 63s.

At the Sheriff Court, Kilmarnock, on Monday, another batch of the Messrs. Gilmour's colliers were brought up on a charge of breach of contract, as last week, but this this time they were defended by S. L. Cattanach, advocate, from Edinburgh. The result was the same as last week, the men were found guilty of having deserted their employment without having given the necessary warning, and were each fined in 10s., with 50s. costs. An offer was again made to stay further proceedings if they would return and work their 14 days' warning, which both the sheriff and their advocate supported. The leaders of the men promised to do all in their power to accomplish this, but some of the men seemed determined to resist to the last. The Court was crowded by the miners and their friends, who received the decision with undisguised dissatisfaction.

Mr. George Baird, one of the members of the Great Gartsherrie firm, has purchased the estate of Kaimflat, near Kelso, for 20,000*l.* The extent of the minerals had not been ascertained.

The Gartness Iron and Steel Works, Airdrie, were this afternoon offered for public sale, at the reduced upset price of 9500*l.*, but there was no attendance, and the sale was adjourned.

The colliery of Drumpark, near this city, with unworked coal and plant, was offered at the same time, by public roup, at the upset price of 12,000*l.* There was a good attendance, but no competition, consequently the property was sold to an agent, who offered the upset price.

All the plant and material connected with the Forth Ironworks and Collieries, Oakley, near Dunfermline, will during October be sold in lots, of which there are catalogues.

REPORT FROM MONMOUTH AND SOUTH WALES.

SEPT. 26.—In the Welsh Iron Trade there is little change to note during the past week, but the improving tendency which has been felt for the past month is maintained, and the reports from the other iron-producing districts are such as tend to strengthen the belief entertained by ironmasters that orders will be more plentiful at the commencement of the approaching quarter, and that the time is not far distant when improved prices will prevail. The new quarter about to be entered upon has caused a disinclination on the part of buyers to give out more orders than is actually requisite until after the preliminary meeting, to be held at Birmingham this day; and although no change is expected to take place at that meeting in the price of iron, the conviction of the most experienced ironmasters is that a time of very gradual but, nevertheless, steady progress has been entered upon, and no retrograde movement is anticipated before the time arrives at which all concede a good trade will be experienced on account alike of the home and foreign consumption. To Cronstadt and Riga the shipment of iron has fallen off, owing to the navigation season being so near its close, and the Russian trade will remain closed until about the commencement of April; but for some years to come Russia will be a very considerable purchaser, and the same may be said respecting British India. A large quantity of iron is being shipped to the United States, and of late the trade with that country has somewhat revived, and large orders are expected for some time to come. To the Mediterranean, Spain, and a few other foreign markets, the exports keep without any material change. As regards the home trade, there is an idea entertained by some few parties that there will not be many railway plans deposited in November next, except for deviations, branch lines, and other trifling matters, which will not influence much the demand for iron, but it is quite evident that a considerable quantity will be required for renewals. One of the leading railway companies, which has been in difficulties for months past, is making enquiries, and has ample funds in hand to make the necessary purchases. Other companies are expected to be in a similar position in a few weeks time, and for the miscellaneous descriptions the home demand is likely to improve. For pig-iron sales are effected without much difficulty, and prices are firmer than they have lately been. The Tin-Plate Trade continues in a healthy state, and the works are well employed. At nearly all the leading establishments Morewood's rolled plates are now being made, and it is generally admitted that the plate is a better finished article than by the old process; the Americans, however, as yet prefer the old plate.

In the Steam Coal Trade a considerable degree of activity is being evinced in connection with the export of coal for the use of the Abyssinian expedition. The mail packet companies are the principal purchasers, and it appears that they have arranged to supply the Government vessels at Aden and elsewhere. Although the demand has considerably increased no alteration has taken place in prices, for the capabilities of the collieries are such that the output can be largely increased. On continental account the enquiry is a little better than it has been. The quantity shipped at Birkenhead keeps about the same, but the efforts made to induce merchants and colliery proprietors to send their coal to that port will, it is expected, ultimately lead to a considerable increase. In the house coal trade there is a full average business doing, and coasting merchants are taking considerable supplies.

It is the intention of Mr. Robert Crawshay to erect in a commanding position by Cyfarthfa Church, in such a place as to be visible from the castle, a fine statue to his father, the late Mr. William Crawshay. The execution of the work is to be entrusted to Mr. Joseph Edwards, the well-known sculptor, and whose native place is Merthyr.

An entire contradiction has been given to some recent rumours that Mr. Abraham Darby intended to retire from the position of managing director of the Ebbw Vale Company (Limited).

The proprietors of the Beaufort and Nant-y Glo Works have determined on placing their hands on shorter time, in consequence of the depression in the iron trade. This is, however, an exceptional circumstance, the Messrs. Bailey not being desirous of burdening themselves with heavy stocks.

The Dowlais Ironworks is said to be not only the largest in South Wales, but in the whole world. They give employment to 9000 workpeople, making 150,000 tons of pig-iron, and raising almost 1,000,000 tons of coal yearly. The history of these vast works is an important chapter in the annals of British industry. Here, after the death of their great owner, Sir John Guest, Mr. Nicholas Wood, Sir William Armstrong, and other great but unprofitable lights tried their apprentice hands at mining and engineering. Since their time the works have been managed by trustees, under the late proprietor's will, and under the style of the Dowlais Iron Company. To blow the various blast-furnaces, to propel the forges and vast mills, and draw coals, not far short of 100 steam-engines are in use. When the works are in full operation, about 5500 persons are underground, and 3500 above, and among them many are women and girls. Schools are attached, in which 3000 children are under instruction; and there is also an Athenæum, with a well-attended library and reading-room.

Lord St. Leonards not having included Pontypridd in the list of towns to which "The Master and Workmen's Act" should be sent, the magistrate's clerk wrote to his lordship, asking him to direct Messrs. Spottiswoode to send copies for circulation, as Pontypridd was the centre of a large mining and manufacturing district, the resources of which were becoming more extensively developed. Strikes unfortunately occurred frequently, but it was hoped that

his lordship's measure would not only much lessen the possibility of their recurring, but bring about a better feeling among the employers and employed, and render them more amenable to the prudent counsel of disinterested advisers. In reply to the clerk's letter, his lordship wrote to say that he had ordered three copies to be sent, and should be much pleased if it worked well in the district.

Mr. G. Arnott, of Gloucester, has invented a brick machine, capable of making bricks not only of clay but of coal dust, concreted with a patent composition, of which the following description is given in his specification :—

"I have a pug-mill erected, with a large screw running down the centre, and to each side of the pug-mill are fastened strong steel plates, which pass through the arms of the screw, so that when either coal or clay is passed into the top it is ground and thoroughly well mixed before reaching the bottom, when it fills a double row of square iron moulds or frames, which are endless, being hinged together, and which rows of moulds pass over two square tumblers (one at each end of the machine), which tumblers are worked by means of an iron rod from the main shaft and a rachet-wheel, and at every revolution of the main shaft the rod takes hold of one of the notches in the rachet-wheel, drags two boxes or moulds out of the pug-mill, passes them under the iron plungers or pressers next to the mill, where they are pressed and marked with trade mark, &c.; and at the same time the next two plungers beyond pass two complete bricks through the bottom of the machine on to an endless band running the cross or contrary way to the piler, or man who takes them off, so that at every revolution of the main shaft either two coal or clay pressed bricks are made. At the low rate of 60 revolutions per minute, one of these machines would make 7200 per hour. All the labour they require is one man to feed and another to take away."

The Uskside Engineering Company, of Newport, Monmouthshire, it seems, have nearly completed one of these machines for the Compressed Coal Company, whose extensive new works are situated at Whitecroft, near Lidney, Gloucestershire, formed for the purpose of using up the heretofore worthless small coal thrown up from the pits in the Forest of Dean. The coal-bricks, after coming from the mill, are soaked in a rock-oil, and afterwards waterproofed; so that whenever a fire is needed, either for house or other purposes, all that has to be done is to break one of the bricks, place it in the grate or elsewhere, and set light to it. The cost, we are informed, will be very considerably below the price now charged for ordinary coals.

For some two or three weeks past the Newport Docks have been so full as to necessitate the hoisting of the signal that there was no more accommodation, and the want thus felt has been canvassed not a little. The promoters of the Alexandra Docks have, it appears, promises of subscriptions for shares to the amount of 115,000*l.*, and this sum they deem sufficient to justify them in commencing the outer dock, which will cover an area of about eight acres. Among the promises referred to is one given by Mr. Crawshay Bailey, M.P., for the sum of 10,000*l.*—5000*l.* as his own contribution, and 5000*l.* on behalf of his works. Mr. Bailey, it is said, has signed for the first moiety, but not for the other, and when gentlemen who have promised to take shares are asked to sign for their promised number, they say they will do so when shown the signature of the borough member for his promised 10,000*l.* This is said to be the only difficulty at present existing, and the sooner the honourable member removes it the better will it be for the town and trade of the port, as the docks will afford vastly increased facilities for the shipment of coal and iron, of which the district produces such enormous quantities.

The arrivals at Swansea include—the Caldera from Totoralillo, with 106 tons of bar copper and 600 tons of copper regulus for H. Bath and Son; St. Saveur from Rotterdam, with 90 tons of pipe clay for Vivian and Sons; Aimable Lizzie from Malaga, with 185 tons of zinc ore to order; Excel from Antwerp, with 155 tons of fire clay for Richardson and Walters; St. Francois from Carioforte, with 193 tons of zinc ore for H. Bath and Son; Liffey Maid from Rotterdam, with 177 tons of pipe clay for Vivian and Sons; and the Eliza from Antwerp, with 5606 cakes of zinc for the Governor and Co. of Copper Miners.

FOREST OF DEAN.—The estrangement previously noticed at the iron works at Lydbrook has been made up. Both parties have yielded, and thus "peace" has been restored. Three weeks cessation from work to non-Union men means something more than exactly "fits." The monthly balance-sheets to such have a very chafing and uncomfortable palate. It is, indeed, "hard lines" when no corn comes to the mill, and it is not less "hard" when working men have to remain from their labour. The beneficial effects of non-Unionism has been here strikingly evinced, and both employer and employee have realised the benefit. The result of negociations between the above parties produced the effect of giving way on either side of 3d. per ton, sixpence being the greivance between them.

The Iron Trade continues to be very satisfactorily placed, prices remaining very firm, if not advanced. This branch continues to manifest a singular degree of animation, and so also with regard to coal and tin-plates, both of which are exceedingly prosperous.

Referring again to the Great Western Colliery, at Bilson Green, it is a subject of the greatest interest to those connected with the coal measures of the Forest of Dean, for unmistakably the greatest anticipation is directed to the possibility of working the measure sought after at its centre, and by this company. It is not too much to say that whilst the speculation of this company has been regarded with some amount of jealousy, sympathy in the undertaking has likewise been expressed by many. What will be the actual result is quite a problem. Thousands of pounds have already been exhausted, and, as stated last week, the shaft has some hundred yards of water in it. Since Monday week, when a rock was tapped, notwithstanding the fact that two powerful engines have been continually drawing off this influx of water, on Wednesday of this week there was no sign of abatement. It is the more discouraging when it is remembered that they had sunk to within a few yards of the coal—that is, presuming the measure ran according to the calculations of persons acquainted with the Forest coal measures.

"Misfortune never comes alone" is a very old saying, and seldom do exceptions to this show themselves. Some months run tranquilly on, and no colliery or mine accidents occur. The last six weeks, however, nothing but "accidents," both with regard to life and property, seem to follow in successive order, so much so that people anticipate, or really dread, what may next transpire. On Saturday, at Parkend, a poor lad who had just completed his week's labour, and who, in company with other young men, were proceeding to the bottom of the shaft to get raised from their subterranean existence in order to return home, was instantly crushed beneath a quantity of rock which fell upon him. From what has transpired, the friends of the deceased strongly censure the conduct of certain men who had for many hours previously been engaged with the roof of the pit at this point. They say the men in question should not have allowed anyone to pass whilst the roof was so very insecure. Undoubtedly this will be a question for a Coroner's jury, and the Inspector of Mines, Mr. Lionel Brough, to decide. The young man's name was Phillips, who was residing with his father, a collier, at Olderoft. On Tuesday another appalling accident happened at the Lightmoor Works. In this case the victim was a middle-aged man. He was descending the shaft at this colliery, and on passing a "cut out" the poor fellow, undoubtedly thinking he had reached the bottom, stepped out of the cage, and fell a considerable distance to the bottom of the pit a lifeless corpse, every bone in his body apparently broken. He was removed to his home to his sorrowing wife and children. It is a matter of regret that in this district some really good provision is not made for such cases of accidental death. Surely the matter only requires to be properly put before those of our colliers whose lives are in hourly peril to induce them to join in some kind of cheap insurance society, which will guarantee sufficient support to those left behind to keep them from the cold hand of parochial relief, which is too often administered with a very grudging and niggardly spirit. There are many friendly societies, it is true, and the majority of colliers are members, but what is 5*l.*, allowed at the death of a member of such a society to a poor woman bereft of her chief support. It is certainly to be hoped that something may be done by the masters in the matter.

REPORT FROM NORTHUMBERLAND AND DURHAM.

SEPT. 26.—The Coal and Coke Trades here continue to improve; indeed, the demand for all kinds of coal appears to increase as the season advances, and no doubt the production will be stimulated to the utmost during the ensuing winter. A few days ago John Hunter, pitman, was brought before the Lanchester magistrates, charged with absenting himself from the services of his masters, Messrs. George Hedley and Co. The offence was proved by Mr. Bell, viewer, South Moor, and the defendant was sent to gaol for two months' imprisonment. This offence is becoming extremely common in North Durham, and especially so in the Lanchester district.

Earl Vane is making arrangements by which several of his viewers and engineers may be able to visit the Paris Exhibition—that is, the viewers and agents connected with the extensive works of the Earl at Rainton, and other places in the county of Durham. The operations at the Wallsend Collieries are still proceeding, although their progress is very much retarded by the influx of large quantities of water. When the larger engines in course of erection are got to work, the water will, no doubt, be rapidly removed, and good progress made. A new shaft has been sunk to some distance, and it was expected that this shaft would have been free from water, but, unfortunately, the water in the old shafts has passed through the strata at a "fault," it is understood, and thus, to some extent, upset the arrangements. It is now understood that the pump will be put down the old shafts, and the main body of water grappled with in this manner. It will be a fortunate thing for the Tyne manufacturers, and others, when the Hebburn, Willington, and Wallsend Collieries are opened out, as the supply of manufacturing and other coal will in time get short.

Mr. W. R. Cole, resident viewer of Bebside and Choppington Collieries, has been appointed by the Right Hon. Gathorne Hardy, Home Secretary, the Inspector of Mines for Northumberland, &c., in place of the late Mr. Alfred Verner. Mr. Cole has been from the earliest stages a practical pitman. He is the son of the engineer of Walker Colliery, and has gradually worked his way up, from an ordinary pitman, to being the resident viewer of the Bebside and Choppington Collieries, where he has filled an important post for the last ten or more years, to the satisfaction of his employers, Messrs. Jobling, Croudace, and Co.

With respect to the Iron Trade, on the whole there is a considerable improvement to notice in all branches. The price of pigs has certainly not advanced, but the demand is improved, and stocks reduced. The works at Tudhoe are an exception to this rule, as another furnace has been blown out there lately, and the stock here amounts to some thousands of tons of iron. The iron manufactured at these works is of a very superior kind, and the demand for iron of a high class does not appear to be so good as for that of inferior quality, which appears to account for the anomalous state of things here. There is, however, generally a much more hopeful feeling in all branches of the iron trade. Founders are pretty well employed, and the iron shipbuilders and rolling mills are better supplied with orders than has been experienced during the present year. An impression is, therefore, gaining ground that next year will prove a busy one, and that all these works will be fully employed. At Jarrow and other places considerable orders have been received for building iron ships of large size, including one for the British Government. The rolling mills at this place are also well employed, and altogether Jarrow, where trade has been long in a depressed state, is about to resume its former activity. The chemical works of Messrs. Kenmir and Co. are now in operation, and those of Mr. Nixon are in course of construction, and when these works are ready the people of Jarrow will be again fully employed.

A very important case in connection with the iron trade was tried at the Gateshead County Court, on Tuesday. The plaintiff, Thos. Worley, sued Messrs. Roberts and Co., iron manufacturers, Felling, for wages which he alleged to be due. The plaintiff acknowledged that he had engaged to produce iron at a certain price per ton. Mr. Brewis, the solicitor for the defendant, therefore contended that the plaintiff was a contractor, and could not be treated as a hired servant. Mr. Brewis also stated that Mr. Partridge, the stipendiary magistrate for Lambeth, had found the new Act which had just come into operation to be impracticable. Mr. Partridge gave reasons to show that under it claims for wages were exempt from the decision of the magistrates. He had consulted another magistrate, and both decided that such cases should go to the County Court. After some discussion, in which Mr. Ramsay (the magistrate at Gateshead), the deputy-clerk, and Mr. Brewis took part, it was decided to adjourn the case, in order that the clerk to the magistrates (Mr. L. Harle) should be present. The case, of course, will come forward again in a few days, and must excite some interest. Mr. Brewis stated, in conclusion, that he was in a position to prove that the statement of Mr. Worley was untrue, and that the plaintiff had been paid for the work he had done.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

SEPT. 26.—There is rather more activity with regard to the Iron Trade of Derbyshire than for some time past, still business is what may be termed dull. There is a fair demand for pipes, and also for merchant iron of most qualities, but few fresh orders of note have found their way into the district. There is a large quantity of pig being turned out, notwithstanding the fact that stocks generally are very large. At Staveley a new furnace has been completed, and yesterday was put in blast for the first time. The demand for Coal continues large, and a very heavy tonnage is being forwarded to London and the South, which may now be expected to greatly expand, in consequence of the Midland Railway being enabled to go direct to London. Owing to the increasing traffic on the Midland, and its probable extension from the new pits being opened out in all directions, as well as from the opening out of the direct line from Chesterfield to Sheffield, Mr. Allport, the general manager, has notified to the local authorities of the former place that the company's engineer has been instructed to take the necessary steps for constructing a new station. In the southern part of the district the colliers at Swadlincote, Church Gresley, and Newhall continue out, and matters have arrived at a very critical point; and there is now every prospect that the question whether the masters will be compelled to employ Union men or not will very shortly be decided. The colliery owners have given their countenance to a free labour association, having for its object the providing a fund for the maintaining the workpeople in sickness and old age, and providing for burials. On the other hand, the leaders of the Union have called upon the men belonging to the association to give in their notices to leave their employment, unless the masters agree to set on those who have been so long out on account of their determination to be Unionists. Seeing that the employers have offers to be provided with hundreds of men, it is not very hard to conclude as to who is to suffer by the struggle, which promises to be of very short duration.

In South Yorkshire most of the large establishments are well supplied with orders, and the Iron Trade, so far, is very healthy indeed, there being a good demand for rails for home railways, and plenty doing in bars, sheets, and hoops. At Milton and Elsecar business was scarcely ever better in nearly all departments. At Thorncliffe also there is more doing, and both the heavy and light foundries are now kept well up. The Stove Trade, which has been quiet so long, is now showing symptoms of revival. There is a fair demand for Coal, not only for household purposes, but for steam, and during the week a very heavy tonnage has been forwarded to London, there being orders in hand for almost any quantity of Silkstones, which are now dividing honours with the best Wallsends, and are increasing in popularity. To Hull and Grimsby a heavy tonnage of "hards" is being forwarded, to the former for the use of the steamers plying to the North of Europe, as well as for ballast for merchantmen. Cargoes are being forwarded to Grimsby for shipment to Russia, and more than usual activity is exhibited at that port, owing to shippers being desirous of forwarding at once, as it is expected the Baltic will in all probability be closed by the ice; indeed, it is not improbable that the cargoes forwarded next week will be the last of the season. Coke continues in fair request, without any alteration in price, so far. The two shafts of the Pindar Oaks Colliery, situate in Barnsley, have now been sunk, the coal having been reached at a depth of about 220 yards.

At the Messrs. Briggs, Son, and Co. (Limited)—the Co-Operative Collieries (Whitwood, Haigh Moor, and Methley Junction, near Normanton)—second annual meeting, on Sept. 21 (Mr. Henry Briggs in the chair), it was stated that the sum divided last year among the workpeople, in proportion to wages, was 1800*l.*, but this year it was 2700*l.* The Chairman believed this success would continue, for so far during the present half-year they had done better than in the corresponding period last year. They had built a school years ago, and had recently erected another, and they desired to do everything in their power to elevate the workers around them. Mr. Hughes, M.P., congratulated the meeting upon the successful results of their co-operation. The directors had been able to pay to the men who worked with their hands and sinews in the colliery for weekly wages no less than 2700*l.* out of the profits of the concern. He was there as a capitalist, having a few shares in the concern, and if the workmen, shareholders, and those who had no share in the firm, but had received a bonus on their labour, were satisfied with the success that had been achieved, he could say that the capitalists also were. But in the co-operative principle, which they were practically propounding, there were other and incomparably greater considerations than merely pecuniary advantages. It might be that in the experiment which this enterprise had so successfuly initiated there was the solution—and, perhaps, the only solution—of that question which had perplexed every civilised country, and the exciting cause of hostility between employers and employed. This enterprise was founded upon the practical recognition of the principle that the interests of capital and labour were identical. As the principle involved co-operation such things as strikes were not at all likely to take place, and simply because co-operation had as its root-principle the idea of justice. They were hearing day by day that the trade of this country was being supplanted, and he did not believe that anything could bring it back, or give England her old post in the very front of the manufacturing and commercial nations of the world, except some form of that system of co-operation which they were carrying out, and which was beginning to take a great hold upon both the workmen and capitalists of England. In a letter addressed to the meeting by Mr. H. C. Briggs (the managing director), who was unavoidably absent, it was stated that Prof. Fawcett had been staying with him in Dundee, and also Prof. Rogers (who occupies the same position at the University of Oxford as Prof. Fawcett does at Cambridge—the Professorship of Political Economy); and he (Mr. Briggs) was pleased to see the continued and increasing interest which these experiments at Whitwood excited amongst such men. In fact, at one of the meetings of the Section of Economic Science of the British Association, he (Mr. Briggs) was publicly and unexpectedly called upon by the President to give some account of their experiments at Whitwood. This is mentioned to show that the proceedings are watched not only by their immediate neighbours, but by men of all classes and all countries. The Rev. W. H. Channing (late Chaplain to the House of Representatives in the United States) told him a few days ago that he had come over to England from America chiefly owing to the interest he felt in the co-operative movement. Mr. Archibald Briggs (secretary) said that the cause of these congratulations was nothing more nor less than the giving a bonus to labour, which was something more than giving them an increase of wages. Mr. E. O. Greening thought there were some memorable results of the two years' working of the Industrial Partnership Principle. Greening and Co. was the second concern in the kingdom to adopt this principle of setting a limit to the amount of profit to be given to capitalists in commercial concerns, and of giving an interest in the result of their labours to the producers of wealth. Among the other speakers who strongly advocated the principle of co-operation were—Mr. James Pyrah, the Hon. and Rev. P. Y. Saville, Mr. John Toft, the Rev. J. A. Armytage, Mr. H. Burnley, the Rev. J. S. Cammell, Mr. Fairbank, and Mr. J. Schofield. A vote of thanks to the Chairman, to Mr. Hughes, and other visitors concluded the proceedings.

THE OAKS COLLIERY—INQUEST ON THE BODY FOUND ON WEDNESDAY.—On Thursday an inquest was opened before Mr. T. Taylor, at the White Bear Inn, Hoyle Mill, near Barnsley, on the body which was brought out of the Oaks Colliery on Wednesday evening. Amongst those present were Mr. Southern, one of Her Majesty's Inspectors of Mines, and Mr. T. Dymond, the managing partner of the Oaks Colliery. After viewing the body, which presented a very ghastly sight, there being nothing to indicate that it was a human frame, excepting the outline of the bones, and the top part of the skull, the lower jaw having come off whilst in the workings, the jury returned to their room. The first witness called was Robert Dawson, who said he indentified the body brought out of the colliery on the previous evening as that of his brother-in-law, John James, who up to the time of the explosion worked at the Edwards Main, and resided at Worsbro'-Dale: he was 51 years of age, and was married, his wife being blind. He last saw him alive on Thursday morning, Dec. 13, at the Oaks Colliery, when he had on a pilot jacket, with grey worsted-wove stockings. He identified the boots produced, and which had been taken off the body, as those worn by his brother-in-law, whilst the remains generally, so far as height and build were concerned, correspond in every way with him. When he saw the deceased at the Oaks Colliery, about 7 o'clock on the morning of Dec. 13, Mr. Minto, a colliery steward, came up, and said they were short of hands, and wished for volunteers. The deceased then went with Mr. Minto, and he never saw him alive afterwards. He had been shown a small portion of a waistcoat of dark speckled cloth, which he recognised as having been worn by his brother-in-law, and he also identified part of a stocking as having been worn by the deceased, from its having been mended with red worsted; and in showing it to his family they all identified it from the same reason.—George Wood, miner, Hoyle Mill, said he knew the deceased, John James, and last saw him alive at the bottom of the Oaks Colliery, about 9 o'clock on the morning of Dec. 13. He was then in the box-hole, but he was not doing anything. He left him there about seven minutes before the explosion, having cried out that there was about to be another blast, and that he and others were going out to avoid it; but he could not say whether the deceased heard what he said, as he made no reply. Had deceased been so minded he could have got out, as after witness reached the top there were two draws, one with two men in it, and the other with only one. A fortnight ago that day, whilst working near to No. 2 shaft, and engaged in putting up some bratticing, he found something at the bottom, which prevented the wood from going down. On examining the cause, he found the knees of the deceased sticking up, and the head buried in beneath some dirt. After a great deal of trouble and labour the body was got out shortly after 5 o'clock on Wednesday afternoon. On being brought out it fell to pieces, having been very much knocked about by the corves, which held it down. It was then placed in a coffin, and taken to the place provided for the reception of the bodies.—The Inspector: The part of the corves which were brought out did not show any signs of having been brunt. The head of the deceased was towards the bottom, and the knees bent and raised up.—The Coroner said as some time would elapse before the state of the pit could be determined, he thought the enquiry should be adjourned for five or six weeks, more especially as some more bodies would by that time most likely be got out.—Mr. Dymond said if any more bodies were found at all early they would be like that of the deceased, who had had the opportunity of escaping, and would be found in the box-hole. With regard to the others, who would be a considerable long way up the workings, it would be weeks, no doubt, before any of them would be brought out, as the scaffolding in No. 2 shaft would have to be taken up, a work in itself which would occupy considerable time. The enquiry was then adjourned to Nov. 28.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

SEPT. 26.—The Preliminary Meeting of the South Staffordshire Ironmasters' Association was held to-day at Birmingham, Mr. W. Barrow, President for the year, in the chair. As was on all hands anticipated, no change was made in the list prices, which continue at 7*l.* 10s. per ton for bars, 8*l.* 10s. for hoops, and 9*l.* for singles and plates at the works. A report was presented from the standing committee of the trade on the subject of the adoption of the Factories Act, but beyond an account of what had been done in Parliament it was mainly addressed to the question of the interpretation of some clauses on which it was decided to take counsel's opinion. With regard to the state of trade, it is satisfactory to state that home merchants are giving out orders for the ensuing quarter, and as yet there is no reason to fear a reaction in the improvement previously reported. The winter quarter is often a quiet one, and it is very possible that a diminution in the demand may be experienced as it advances. The accounts generally as to the state of the hardware trade are unfavourable.

The contest between the coalmasters and the Unions in South Derbyshire continues. Near Burton, in this county, a considerable number of colliers attached to the Union have been dismissed, and a Free Labour Association has been established to counteract the Union influences. There are, however, some 200 Unionists still at work in the pits, and it is said that unless the other Unionists, previously discharged, are taken on these others will leave work on Saturday.

On Friday Mr. Robert Baker, the chief Inspector for this part of the country under the Factories Act, met a number of the manufacturers of the town and the district at the Town Hall, Wolverhampton, for the purpose of affording explanations as to the working of the Factories Acts, which in the case of all ironworks, glassworks, foundries, printing offices, and some others, and all other employments in which 50 or more are employed under one firm or master, will come into operation on Jan. 1 next. The result appears to have been very satisfactory. Mr. Baker showed a thorough acquaintance with the practical difficulties which may be expected to arise to carrying out the provisions of the Acts, and pointed out how he should proceed so, as he said, as to "put the saddle on the right horse." This part of his statement was very satisfactory, as in many cases men working by piece have boys and women in their employment, and Mr. Baker said he should hold them responsible for the observance of the provisions of the Acts, if the proprietor of the works should devolve that duty upon them. Probably most of the manufacturers will prefer to dispense with the employment of boys altogether, rather than incur the responsibility and trouble of carrying out the half-time system. This is natural, but it is much to be regretted. Theory and experience alike affirm that in no way can the steps from boyhood to manhood be taken so advantageously, both in a physical and moral point of view, as by halving the day, or taking alternate days for work and for instruction. The influence of the school greatly modifies the evil results which often follow from lads being exposed to the companionship of men, whilst the gradual exposure to sustained bodily exertion has a very salutary influence on the bodily vigour of youths.

A meeting of between six and seven hundred ironworkers connected with the Ironworkers' Association, of which Brierley Hill is the centre, was held in that town on Monday. It was stated that more would have been present, but that several of the large ironworks were in operation on that day. Mr. C. Allkins, the president of the association, was in the chair. The object of the meeting was to pass resolutions similar to those which most of the Unions throughout the country have adopted in reference to the recent disclosures before the Special Commission which has sat at Sheffield and Manchester. The first resolution affirmed the value of trade organisations in general, as indispensable to bring masters and workmen together for the adoption of general regulations, and for the purpose of mutual assistance in case of sickness, death, or want of employment. The second expressed "indignation, horror, and abhorrence" at the crimes of Broadhead and others, and of the Brickmakers' Union at Manchester, but pronounced the general accusations made on account of those revelations by certain writers against trade societies to be "malicious, and written for the special purpose to sink the reputation of working mens' unions in the eyes of the public in general," adding, "we repudiate the charges that have been made by all such writers with scorn and contempt." A further resolution was adopted, expressing the readiness of the association to form a confederation with the northern district, provided the latter would "give a pledge to renounce the services of a professional president, whose office we (the Brierley Hill Association) consider a mere sinecure." A representative of the London tailors asked for assistance, and 20*l.* was voted for the purpose.

There has lately been an extraordinary number of fatal accidents from the bursting of the tuyeres of blast-furnaces in South Staffordshire. Most persons know that those tuyeres are a sort of hollow cone, the nozzle of which is inserted into the blast-furnace, and through which a powerful blast is forced, so as to raise the fuel in the furnace to the high temperature necessary to melt iron ore. To keep the tuyeres themselves from being burnt, they are constructed with a hollow space, through which water continually circulates, and it is when from some cause they are burnt through or crack that the water runs into the fire, flashes into steam, and blows out the molten metal and cinders. On Friday last three men were at work at the Millfield Furnaces, near Bilston, when one of these accidents occurred. At that moment they were about to pass the furnace, and they were suddenly exposed to a burning shower. Two are already dead, and the third is hardly likely to recover. One of them had a brother in the hospital to which he was taken, who had been burnt shortly before. It was stated at the inquest that the tuyere which burst was only put in two days before the accident, that it was on a patent principle, and that it was examined and found to be all right a few minutes before the accident. The witnesses could offer no suggestions with a view to avoid such accidents, and one said he had been studying how to prevent them all his life. This is one of many cases which cry loudly for some careful investigation, with a view to diminish at least the occurrence of accidents so fearful, and which are of so frequent occurrence. A writer in a local paper suggests that these accidents are more likely to happen when the tuyeres are placed

...front, as well as the other three sides of the furnace. If any sort of organisation existed in South Staffordshire amongst managers of ironworks, a discussion on the question of these accidents would be very desirable.

THE NORTH STAFFORDSHIRE AND DUDLEY NATURALISTS' FIELD CLUBS made a joint excursion, on Monday, to Cannock Chase, for the purpose of visiting some new collieries on the northern margin of the South Staffordshire Coal Field. They first of all inspected the fine works of the Cannock and Rugeley Collieries Company, over which they were conducted by Mr. Kenrick, the manager. Very general admiration was expressed at the completeness of the plant, and at the excellent quality of every portion of it; and two or three circumstances transpired which showed that the strictest discipline was maintained. There are two shafts, each of which has its own engine, the cylinders being respectively 32-in. and 36-in. The engines were manufactured by Messrs. Thorneyville and Wareham, of Barton, and work beautifully. The lease of the company, which is held under the Marquis of Anglesey, extends over a very large area, and, although something like 60,000*l.* has been expended, the condition and prospects of the concern are highly satisfactory. Having inspected the works on the surface, the visitors, including several ladies, descended the No. 1 shaft, which is about 200 yards deep, and works a 7-foot seam. On reaching the bottom they were again favourably impressed with the liberal spirit in which the company carry on their operations. They were conducted through the workings in two parties, and on returning to the pit bottom were invited into the office, and refreshed with sandwiches and sherry. After a pleasant chat on the principal objects in the pit, they took the return journey to surface, and subsequently descended pit No. 2, in which a 9-feet seam is being worked, and where a large ventilating furnace is in course of construction. At the present time the quantity of fresh air passing into the pit is about 30,000 cubic feet per minute, but when this new furnace is completed it is estimated that quantity will be raised to 150,000 feet. From the colliery the visitors proceeded to the open works of the same company, about a mile distant, where the coal crops out, and where extensive brickworks are carried on. The Cannel Pit of the Cannock Chase Colliery Company was also inspected, the private lines and locomotives of the companies named being placed at the service of the excursionists. They then returned to Hednesford, and dined together at the Cross Keys Inn, with sharpened appetites and in excellent spirits. After dinner the Rev. T. W. Daltry, on behalf of the North Staffordshire Club, and Mr. Martin, of Stourbridge, on the part of the South Staffordshire visitors, thanked the directors of the two companies, and also Mr. Kenrick, for the kindness and courtesy with which they had been received. Mr. Peake, one of the directors of the Cannock and Rugeley Colliery Company, acknowledged the compliment, and said the management of collieries was a different thing now-a-pays from what it was formerly. Some years ago it was thought desirable to observe as much secrecy as possible, but that idea was now exploded, partly, perhaps, because it was known that if you wanted to learn anything about your neighbour's pits a quart of ale would put it in your power to do so. (Laughter.) He thought it was better to do everything openly; it did no harm to anyone who acted in that manner, and might possibly do others good. (Applause.) Although it cannot be said that any important additions were made to the scientific knowledge already possessed by the excursionists, or that the day will be memorable for any startling discoveries in practical or theoretical geology, the field naturalists spent a very pleasant holiday. They had ample opportunities of observing the manner in which the Bunter conglomerate overlies the coal measures at Cannock Chase, and that many of the numerous valleys intersecting the Chase are the result of denundation, the hills and railway cuttings displaying, in many cases, interesting sections of the conglomerate, while the beds of the valleys consist either of the clays of the coal measures or gravel drift of a much more recent period. At the openworks and the Cannel pit a few fossils were bagged, including specimens of diplodus gibbosus, palæoniscus, anthracosia Phillipsii, anthracosia ovata, and aviculapecten fimbricata, the latter a marine shell, which was probably never before noted in that part of Staffordshire.

GOLD AND SILVER IN NEVADA (U. S. A.).

The value of the gold and silver deposits of Nevada is so well known that it is unnecessary to refer to the prospects connected with mining enterprise in that district. The GREAT REPUBLIC GOLD AND SILVER MINING COMPANY, which was incorporated by a special Act of the Virginian Legislature at the beginning of the year, has just announced the issue of 100,000*l.* 7 per cent. first mortgage bonds, at 60*l.* per cent., of which one-third is to be paid upon application, and the remainder upon allotment. The bonds are sterling coupon bonds, of 50*l.* each, and the interest is payable half-yearly in London. The bonds are convertible, at the option of the holder, into fully paid-up shares at par, which shares have been deposited at the bankers, in the name of the trustees in London, provided application be made for that purpose within three years. The company has obtained the necessary powers for the purpose of mining, smelting, manufacturing, and selling ores, and for dealing in lands in any or all of the states and territories in the American Republic. Operations are to be commenced upon a valuable property in the Manhattan district, Nye county, State of Nevada, which consists of five separate and distinct mines or lodes, of 1800 feet in length each, and extends 100 feet on each side of these lodes. The district is that which has been especially referred to in the lectures of Prof. Silliman, at Yale College, and there is easy access from San Francisco to the company's mines. There is an abundant supply of wood and water, while the climate is one of the most healthy in the world.

The company's Act of Incorporation fixed the capital at 800,000*l.*, of which it appears 150,000*l.* has been fully paid up, and in the prospectus now issued it is remarked that the company, knowing the advantages of working all their mines at the same time, have issued bonds, payable in six years from their date, and drawing 7 per cent. interest, payable half-yearly, for the purpose of meeting the necessary large expense in procuring machinery, and transporting the same to the mines. The payment of each bond is secured by a deed of trust from the company, conveying all the property they now own, or may hereafter acquire, including all the machinery, fixtures, land, and property of every kind and description, which fact is fully set forth in the body of the bonds, and endorsed thereon by the trustee; in fact, it can be clearly seen that every precaution has been taken to make the bonds a good and secure investment.

The mines have been inspected and reported upon by Mr. W. M. Murray, mining engineer, and by Prof. J. E. Clayton, the report of each of these gentlemen being appended to the prospectus. Mr. Murray reports Manhattan to contain a vein of black antimonial ore 5 feet thick, assaying from $53·69 to $270; Cherokee, a vein 7 feet thick, ore sulphuret of copper holding gold, assaying $45·23 to $308·63; Choctaw, a vein 6 feet thick, sulphoid of silver, assaying $29·63 to $96·23; Seneca, a vein 15 ft. wide, ore sulphuret of silver (this vein is described as well defined, and cropping out for 1000 feet), assaying from $63 to $372; and Wyoming, a vein 5 ft. thick, showing free gold, and assaying from $94·13 to $516. Mr. Murray considers that "this district when developed will far exceed Silver Peak, in the said county; my reasons for making this statement will be plain to all who may visit either—the geological formation is far in favour of the Manhattan, and the Peak, considering the capital expended, has in the space of three months given a dividend which excels the Comstock in its palmiest days." Prof. J. E. Clayton reports that he has traced one vein that is from 6 to 15 feet thick, well defined, good true walls, and crops out boldly for about 1000 feet in length; he made some tests of the ore that yielded over $200 per ton. This is a good silver-bearing district, the veins contain a great deal of horn silver, and compact chloride ore in great quantity, which can be easily extracted from these mines. The supply of wood and water is convenient, and sufficient for all practical purposes. The district is easily accessible by a good road.

UTILISATION OF COAL DUST.
BARKER'S PATENTS.

THE LONDON PATENT COAL COMPANY (LIMITED) having arranged with the patentee for the exclusive right to these patents within the United Kingdom, desire to call the attention of coal owners, ironmasters, and others, to the value of the invention by which the waste and small coal can, by a simple and inexpensive process, be rendered available for all the ordinary uses of the coal from which it is derived.

A series of careful experiments have been made on the Monmouthshire Railway with fuel manufactured from the Risca Black Vein Coal (small) in locomotives working heavy mineral trains over severe gradients, by which it has been ascertained that increased duty was obtained from the fuel over the same coal. The results of these experiments are so satisfactory that Mr. Alex. Bassett, C.E., of Cardiff, has consented to act as the company's representative for granting licenses in South Wales, and will be happy to reply to all enquiries and give full explanation respecting the trials that have been made under his superintendence. Mr. Thomas D. Clare, of Birmingham, has also undertaken to represent the company in the Midland Counties, and large works are in course of erection in the Forest of Dean by the company's licensees there.

The company are prepared to grant licenses for the use of their patents, and from the success which has attended the manufacture at their own works, and the extraordinary popularity of the fuel for retail purposes amongst the lower classes, they believe that in every populous town a large and highly profitable trade may be carried on.

The cost of the ingredients used in the manufacture does not exceed 1s. per ton; they contain no pitch, tar, or other nauseous substance, and the manufacture is not more expensive than ordinary brick-making.

The blocks are available for every purpose of ordinary coal, and stow in one-fourth less space (1 ton of fuel occupying 33 cubic feet only, as against 42 Admiralty measurement for coal).

The cost of the machinery, &c., necessary for the production of 100 tons daily will not exceed £700.

Experiments have for some time past been in progress at Woolwich with the view to render petroleum and other analogous oils available for use under steam-boilers. The patentee's attention being directed to this fact, he found that the company's fuel, being porous, would rapidly absorb these oils, 1 ton of fuel taking up 50 gallons. This absorption does not in any way affect the solidity of the blocks, and it is believed they are the best medium for the purpose yet discovered, and that the fuel oil bricks will be an immense advantage to ocean steamers and vessels of war, on account of the vast saving in stowage and their steam-producing powers. The Admiralty have just granted permission for an official trial of the company's fuel to be made at Woolwich.

The value of the company's patents to all coalowners must be at once apparent. It is also of especial value to ironmasters; and, where the slack is used for coking purposes, the process may be adopted to advantage in roughly amalgamating the coal into blocks before placing it in the ovens. These blocks require no previous drying, and produce more coke and of better quality.

The company will be happy to receive specimens of coal dust at their North Fleet Works, which will be manufactured and reported upon free of charge, and they will send a competent person to manufacture a small quantity of fuel at any colliery where the experiments may be desired.

For further particulars respecting license, terms, &c., apply to the company's representatives in their respective districts, or to the Managing Director, 26, Martin's-lane, Cannon-street, E.C., London. By order,

26, Martin's-lane, E.C. EDWIN W. GLOVER, Secretary.

FRANCE AND BELGIUM.

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COAL CUTTING MACHINERY.—The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY to MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES.

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All communications to be made to Messrs. FIRTH, DONNISTHORPE, and BOWER, No. 8, Britannia-street, Leeds.

NOTICE.—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE.

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By J. L. CURTIS, M.D., 15, ALBEMARLE STREET, PICCADILLY.

REVIEWS OF THE WORK.

"MANHOOD.—We feel no hesitation in saying that there is no member of society by whom the book will not be found useful, whether such person hold the relation of a parent, preceptor, or clergyman."—*Sun* Evening Paper.

"Dr. Curtis has conferred a great boon by publishing this little work, in which he described the source of those diseases which produce decline in youth, or more frequently premature old ages."—*Daily Telegraph*, March 27, 1856.

Also, from the same author, for 1s., or 16 stamps sealed,

DR. CURTIS'S MEDICAL GUIDE TO MARRIAGE: A Practical Treatise on its Physical and Personal Obligations. With rules for removing certain disqualifications which destroy the happiness of wedded life. Sold by ALLEN, 11, Ave Maria-lane; MANN, 39, Cornhill, London. Consultations daily, from Ten to Three, at No. 15, Albemarle-street, Piccadilly London, W.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the HALLENBEAGLE MINING COMPANY.—TO BE SOLD, BY PUBLIC AUCTION, at and upon the Hallenbeagle Mine, in the parish of Kenwyn, in the county of Cornwall, under the direction of the Registrar of this Court, on Monday, the 7th day of October next, at Twelve o'clock at noon, subject to such conditions as shall be then and there produced, in One or several Lots, as may be then and there determined on, the undermentioned MACHINERY, PITWORK, MATERIALS, and OTHER EFFECTS, viz.:—

ONE 60 in. ENGINE, equal beam, with THREE BOILERS, about 10 tons each, and 2 balance bobs.

ONE 22 in. STEAM WHIM ENGINE, with ONE BOILER, about 9 tons, with capstan and crusher attached, complete.

A 6 in. plunger pole; stuffing box and gland; H piece and door piece, and 2 7 in. pumps; 58 fms. of 9 in., 50 fms. of 15 in., and 21 fms. of 8 in. pumps; 5 11 in. 9 ft. pumps; 9 13 in. pumps and 8 7 in. pumps; 2 9 in., 1 15 in., and 1 10 in. H pieces; 2 9 in., 1 15 in., 1 10 in., 2 14 in., and 1 8 in. door pieces; 2 9 in. and 1 15 in. plunger, pole case; stuffing box and gland; 2 10 in. and 1 13 in. plunger poles; 1 11 in. pole case; stuffing box and gland; 1 13 in. stuffing box and gland; 1 15 in. 6 ft., 1 14 in. 6 ft., 1 8 in. 8 ft., 1 10 in. 6 ft., 1 8 in. 6 ft., and 1 14 in. windbores; 1 14 in., 1 8 in. 12 ft., 1 8 in., and 1 12 in. 12 ft. working barrels; 106 fms. 13 in. main rods, with staples and glands; 26 fms. 2 in., 14 fms. 1⅛ in., and 20 fms. 1¼ in. bucket rods; 20 fms. 8 in. rods, with strapping plates and bolts; 80 fms. 6 in. rods; 106 fms. iron stave ladders; 106 fathoms knocker line and knocker; 120 fms. 9 in. capstan rope; shears and shieves; 5 shears, with shieves, complete: 46 2 ft. shieves, with stands, and about 150 fms. 2 in. round rods, with balance bob, complete; shears, with shieve; 77 2 ft. shieves and stands; 8 4 ft., 1 3 ft., 1 5 ft., and 1 6 ft. shieves; landing wagons; tramroad and bridge rails; steam whim kibbles; 7 shaft rolls; small crab winch; 1 2 ft. and 3 14 in. matchings; 1 8 in. turnpike; shaft gig; about 70 fms. wood launders and stands; 3 horse whims; 2 shaft tackles; 4 whim kibbles; wood shed; 8 arm capstan; hand and other barrows; 7 wood dressing sheds and floors; beams, scales, and weights; 5 washing hutches and plates; 9 jigging hutches; 8 sieves and frames; about 4 tons of ⅜ in. fire whim chain; balance bob sword; 2 pairs of 18 in. yokes; pair of dandy wheels; screw stocks, plates, and taps; grinding stone and stand; 10 riddles; 1 brass bell; about 1 cwt. of anti-friction grease; vice; 2 iron blocks; clack seating; brass spiles and sheds and sampling iron; 2 sawpit frames; jack and slide screws; smiths' crane; 2 pairs of bellows; 2 anvils; mandril; smiths' and miners' tools; staples and glands; flange bolts; steel borers; roll of pump bucket leather; 1 coil of knocker line, 1 coil packing rope, and 1 coil of ratling line; about 2 cwts. of tallow; oil; nails, &c.; about 1 cwt. of blister and cast steel; shovels; winze; kibble; brass seatings; old brass, copper, and sheet lead; about 3 cwts. of powder; old castings; a quantity of new and old iron; new and old timber; candles; safety fuse; and a quantity of halvans. Together with the account house and sampling house furniture, and a variety of other materials and effects in general use in mines.

For further particulars, or to view the materials, apply to Mr. W. SLEEMAN, the officer of the Court, at the mine. JOSEPH ROBERTS, Truro

(Agent for Messrs. R. W. Childs and Batten, solicitors, 25, Coleman-street, London).

Dated Truro, 12th September, 1867.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WEST WHEAL PROSPER MINING COMPANY.—By the direction of His Honor the Vice-Warden, notice is hereby given, that on Friday, the 11th day of October next, at the Registrar's Office, at Truro, in the county of Cornwall, at Eleven o'clock in the forenoon, this Court will PROCEED to MAKE a CALL of THREE POUNDS FIVE SHILLINGS PER SHARE on all the contributories of the said company, settled on the list of contributories under class A. All persons interested therein are entitled to attend at the time and place aforesaid to offer objections to such call. WM. MICHELL, Registrar of the said Court.

Dated Truro, this 26th day of September, 1867.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the CLOWANCE WOOD MINING COMPANY (LIMITED).—Notice is hereby given that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 21st day of September instant, presented to the Vice-Warden of the Stannaries, by William James Thompson, a contributory of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the College Hall, Exeter, on Saturday, the 5th day of October next, at One o'clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioner, his solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 2d day of October next, and notice thereof must, at the same time, be given to the petitioner, his solicitors, or their agents.

HODGE, HOCKIN AND MARRACK, Truro, Cornwall
(Agents for Matthews and Greetham, 68, Lincoln's Inn-fields, London, Solicitors for the Petitioners).

Dated Truro, September 25, 1867.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN RE NORTH WHEAL ROBERT MINE.

TO BE SOLD, pursuant to an Order made in a Cause Matthews v. Bullen and others, and dated the 15th day of August last, at the Registrar's Office, in Truro, on Wednesday, the 9th day of October next, at Twelve o'clock at noon precisely,

24 (4201) PARTS or SHARES of the defendant, H. Bullen.
20 (4201) PARTS or SHARES of the defendant, R. Armstrong.
20 (4201) PARTS or SHARES of the defendant, G. Cowland.
40 (4201) PARTS or SHARES of the defendant, Henry Dace.
15 (4201) PARTS or SHARES of the defendant, G. H. B. Hewett.
25 (4201) PARTS or SHARES of the defendant, W. Humphreys.
25 (4201) PARTS or SHARES of the defendant, J. G. Suckling.
40 (4201) PARTS or SHARES of the defendant, J. Bovey.
12 (4201) PARTS or SHARES of the defendant, M. F. Halket.
50 (4201) PARTS or SHARES of the defendant, W. Richardson.
40 (4201) PARTS or SHARES of the defendant, T. Campbell.
12 (4201) PARTS or SHARES of the defendant, E. Welch.
10 (4201) PARTS or SHARES of the defendant, John Cragg.
58 (4201) PARTS or SHARES of the defendant, C. Mate.
50 (4201) PARTS or SHARES of the defendant, G. Read.
200 (4201) PARTS or SHARES of the defendant, Sir W. Smith.
196 (4201) PARTS or SHARES of the defendant, W. Pool; and
25 (4201) PARTS or SHARES of the defendant, G. A. Rolls,

Of and in the said MINE.

HODGE, HOCKIN, AND MARRACK, solicitors, Truro
(Agents for Tufnell Southgate, 7, King's Bench-walk, Temple, London, E.C.)
Dated Registrar's Office, Truro, Sept. 26th, 1867.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

GATLEY v. BALL.

IN RE DUCHY AND PERU MINE.

TO BE SOLD, pursuant to an Order made in the above Cause, and dated the 21st day of February, 1867, BY PUBLIC AUCTION, at DUCHY AND PERU MINE, in the parish of Perranzabuloe, within the said Stannaries, on Tuesday, the 8th day of October next, at Eleven o'clock in the forenoon, the undermentioned MINING MACHINERY, MATERIALS, and OTHER EFFECTS, namely:—

ONE 33 in. cylinder PUMPING ENGINE, boiler 9 tons; 9 in. plunger pole; 9 in. windbore; 9 in. H piece; 1 9 in. doorpiece, 1 15 in. ditto; 1 10 in. working barrel; 20 fms. of 15 in. pumps, 3 11 in. ditto, 2 16 in. ditto; 1 14 in. working piece; 1 15 in. windbore; stuffing box and glands; balance bob attached to the connection rod, and 1 ditto at western shaft; 2 shears, 3 whims, with chain and poppet heads, complete; 87 fms. of 12 in. rope; 7 iron bucket rods and strapping plates; 1 ore screen; whip pulley; 2 tram wagons; about 70 fms. of tramway, 40 fms. of launders, 20 fms. of flat iron rods; sheds and flooring, carpenters' bench, saw pit and frame; 36 in. bellows, anvil, vice, and smiths' tools; 2 large chests; beam and scales; a quantity of iron; grinding stone; rope, chain, bugles; 1½ cwt. of grease; sieves, chest, weighing machine and weights; account-house and office furniture, and a variety of other articles and effects in general use in mines.

For further particulars, apply to Mr. JOHN JAMES, the officer in charge thereof.
HODGE, HOCKIN, AND MARRACK, Plaintiff's Solicitors, Truro.

Dated Registrar's Office, Truro, Sept. 26th, 1867.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

PURSUANT to an Order made in the Cause of Gatley v. Ball, the creditors in respect of DUCHY AND PERU MINE, in the parish of Perranzabuloe, within the said Stannaries, are, on Monday, the 14th day of October next, at Eleven o'clock in the forenoon, to COME IN and PROVE THEIR DEBTS before the Registrar of the said Court at his office, in Truro, or in default thereof they will be excluded the benefit of the said Decree.

Dated Registrar's Office, Truro, 25th September, 1867.

HIGHLY IMPORTANT INVESTMENT.—MONTGOMERYSHIRE.

MR. T. W. HILL begs respectfully to announce that he has received directions to submit to PUBLIC AUCTION, at the Wynnstay Arms Hotel, Oswestry, on Tuesday, the 8th of October, 1867, at Four o'clock in the afternoon, subject to conditions then to be declared (unless disposed of in the meantime by private treaty, of which due notice will be given), all that most promising MINE, known as the

"HIRNANT LEAD MINE,"

With recently-erected DWELLING HOUSE, BUILDINGS, MACHINERY, and PLANT, situate near LLANGYNOG, in the county of MONTGOMERY.

This mine has been worked up to a recent date by a small company, with a very limited capital, and is sold owing to the want of funds to carry on the work; indeed few mines have better indications of so many good joints in lead-bearing ground.

It can be worked to a depth of 108 yards without steam or water power, which is of great importance, and there is not a doubt, if prosecuted with spirit and economy, a lasting and most profitable mine will soon be developed. There are 447 acres, with good joints, under lease from the Earl of Powis, at a small royalty, payable when the mine is in full work.

There is a most comfortable recently-erected captain's house, offices, smithy, and engine-house, powerful water-wheel, pumps, smiths' tools, and all other necessary plant of the best description, and in good working condition.

Some of the more wealthy shareholders are still anxious to retain an interest in the mine, and wish to reserve the right of becoming shareholders therein, so sanguine are they of its prosperity, which is substantiated by the most eminent engineers.

A plan and section may be seen at Hirnant at the offices of Mr. JOHN PILKINGTON, Mining Engineer, Wrexham; or on application to the Auctioneer, Oswestry, where all further information may be obtained.

THE ST. CUTHBERT LEAD SMELTING COMPANY (LIMITED), IN LIQUIDATION.

MR. PHILIP D. TUCKETT is instructed to SELL, BY AUCTION, at the Mart, Tokenhouse-yard, London, on Tuesday, October 22d, at Twelve o'clock, in One Lot, almost without reserve, the very valuable FREEHOLD and LEASEHOLD PROPERTY, known as the

ST. CUTHBERT LEAD SMELTING WORKS,

or the PRIDDY MINERY, three miles from the City of Wells, comprising THIRTY-SEVEN ACRES OF LAND, of which about 20 acres are covered by a rich and valuable surface accumulation of lead-producing debris, estimated to contain 35,000 tons of metallic lead; together with the smelting-furnaces, engine-houses, machinery, manager's house, workmen's cottages, &c., recently erected at great expense, capable of turning out from 40 to 100 tons per month, at a cost of from £10 to £12 per ton, with little or no additional outlay.

Particulars, with plans and conditions of sale, may shortly be obtained at the Swan Hotel, Wells; or of Mr. PHILIP D. TUCKETT, land agent, surveyor, &c., 76, Old Broad-street, and 3, St. Martin's-place, Trafalgar-square, London, W.C.

DYFNGWM LEAD MINES.

TO BE SOLD, BY TENDER, the above VALUABLE MINES, situate in the parish of PENEGOES, in the county of MONTGOMERY.

These mines are in full work, and are sunk to a depth of 82 fms. from the adit level. Levels are driven about every 10 fms. between the adit level and the 82 fm. level, and are capable of employing a large number of miners.

The MACHINERY, PLANT, &c., comprise THREE WATER WHEELS, of 55 ft., 40 ft., and 14 ft. diameters respectively. The two larger wheels were very recently erected, and all three worked by the same stream of water. The 55-ft. water wheel is used for drawing and pumping from all the levels down to the 82; the 40-ft. wheel drives a first-class powerful crushing-mill; and the 14-ft. wheel works a 15 fm. lift of pumps.

There are also TWO POWERFUL STEAM-ENGINES, lines of rods, lift of pumps, drawing-machine, wire ropes, chains, tramways, wagons, jiggers, sheds over floors, and all the apparatus for dressing any quantity of ore, &c.

With a small additional outlay these mines are capable of great extension, and the indications at the bottom of the 82 fm. level promise ample returns for an additional outlay to sink deeper.

These mines are contiguous to the celebrated Dyliffe Mines, and on the same lode. There is a communication underground from one mine to the other.

For further particulars, apply by letter to GEORGE HADLEY, Esq., No. 7, Aldridge Road Villas, Westbourne Park, W., who will give an authority to any person wishing to inspect them.

Tenders to be sent in on or before the 15th of October, addressed to GEORGE HADLEY as above.

The purchaser will be required to pay a deposit of 20 per cent. on the amount of the purchase-money on his tender being accepted, the purchase to be completed, and the balance of the purchase-money paid, within one month from the payment of the deposit.

ON SALE, a WROUGHT-IRON PIER, of VERY SUPERIOR CONSTRUCTION, complete, and ready to be fixed in place, and suited for the sea-shore. The length of the pier is 800 ft., including the pier-head at the end, of 40 ft. by 42 ft. The width of the roadway is 13 ft. in the clear, intended for a single line of rails, supported upon transverse girders of patent beam iron, 8¼ in. deep, fixed between two lines of longitudinal lattice-girders, of 20 ft. span, and 3¼ in. deep. The whole is supported upon 107 wrough-iron piles, made of "best best" boiler-plates, ⅜ and ½ in. thick, and 1 ft. external diameter, varying from 12 ft. long at the shore end to 60 ft. at the pier-head, united by a system of diagonal tie-bars, stays, &c., and each provided with a cast-iron screw at the bottom end for screwing it into place.

Price and further particulars, with orders to inspect the pier, may be obtained on application to Mr. JOHN VERNON, Regent-road, Sandon Dock, Liverpool.

Mr. VERNON would be willing to undertake the fixing of the pier in place, if required, ready for public use.

COLLIERIES, LIMESTONE QUARRIES, AND LIMEKILNS.

TO LET, WORKING COLLIERIES, LIMESTONE QUARRIES, and LIMEKILNS, in CUMBERLAND, and may be entered upon immediately.

1.—The GRAYSOUTHEN COLLIERY, the freehold property of the trustees of the late J. Harris, Esq., situate near WORKINGTON, in the county of CUMBERLAND, comprising pits working the Main Coal and Lick Band Seams, with railway communication over the freehold property of the trustees to the Cockermouth and Workington Railway. These coals are well known in the shipping port of Workington. Together with all the PUMPING and WINDING ENGINES, RAILWAYS, and all the ESTABLISHMENT and PLANT of the colliery in full current working.

2.—Attached to the colliery are several LEASEHOLD and FREEHOLD PROPERTIES, comprising from 50 to 60 acres of the Main Coal seam untouched, lying adjacent and to the rise of the Meigram Fitz Colliery, belonging to Messrs. Fletcher, which may be included with No. 1, or let separately for an independent winning, with rights of free way-leave over the Graysonthen Estate.

3.—Also the BRIGHAM FREEHOLD LIMESTONE QUARRIES and LIMEWORKS, in full working, with tramway communication to the Cockermouth and Workington Railway. The quality of this limestone for iron manufacture has a high reputation, being nearly a pure carbonate of lime, and for agricultural and building purposes it has an extensive local and railway sale. Together with all the plant attached to the said limeworks.

For permission to examine the premises and plans, and for more detailed information, apply to Mr. DICKINSON, Thorncroft, Workington; or Mr. WILLIAM ARMSTRONG, Wingate, county of Durham; and sealed tenders, addressed to Mr. DICKINSON, will be received up to the 1st November next.

GRANITE QUARRY.
STEWARTRY OF KIRKCUDBRIGHT, SCOTLAND.

TO BE LET, the RIGHT to QUARRY the GRANITE known as the WEDGE ROCK, which is intersected by the Portpatrick Railway, between Gatehouse and New Galloway Stations.

The colour and quality of this granite have been pronounced by good judges to be excellent, and nothing can exceed the facilities for carriage by railway either to distant parts of the country or to the harbour of Kirkcudbright.

The rock has been laid bare, and blasted sufficiently to enable a satisfactory opinion of the granite to be formed.

For further information apply to H. J. MOULE, Esq., Gatehouse, Kirkcudbright.

TO BE SOLD, CHEAP, a PORTABLE ENGINE of 14-horse power, double cylinder, of first-class construction, workmanship, and material. Winding gear to order. SECOND-HAND PORTABLES FOR SALE.—Apply to Messrs. BARROWS and CARMICHAEL, engineers, Banbury, Oxon.

PARIS EXHIBITION, CLASS 52.

MEDAILLE D'HONNEUR.

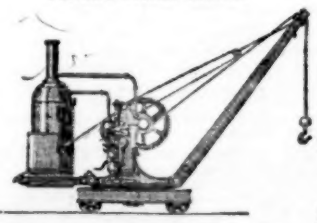
APPLEBY BROTHERS,

EMERSON STREET, SOUTHWARK,

LONDON, S.E.,

Engineers and Patentees of STEAM CRANES, DONKEY PUMPS, &c.

PATENT STEAM CRANE.



TO LIFT, RADIATE, AND TRAVEL BY STEAM.

PATENT DONKEY PUMPS.

Ram	1⅛ in.		2 in.		2¼ in.		2½ in.		2¾ in.		3 in.		3¼ in.		4 in.
*Gall. per hour	220		400		680		850		1200		1500		2100		2300		3800
Approx. H.P.	15		25		40		50		80		95		130		150		230
Price	£10 5	..	£12 10	..	£15		£18		£21		£24		£ 28		£30		£35

* Calculated at 200 strokes per minute.

BICKFORD'S PATENT SAFETY FUSE

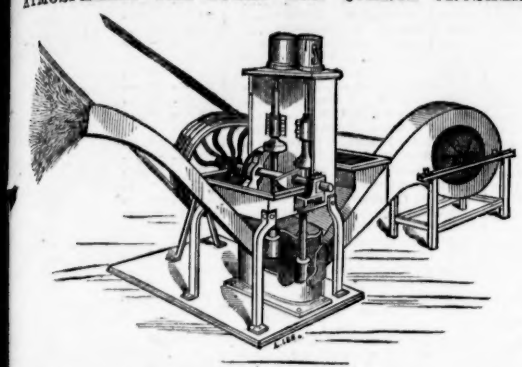
Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; and at the "UNIVERSAL EXPOSITION," in Paris, 1867.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—

EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

CHILDS' PATENT

ATMOSPHERIC ORE STAMP AND QUARTZ CRUSHER.



THIS is an IMPROVED STAMP, and will give as many blows per minute as an ordinary 10-stamp-mill, and of far greater force, giving an effective blow of from 150 to 200 tons per minute, and will crush any known ore to an impalpable powder, saving every particle of the product for future operations,—a result not before obtained by any stamping process. Greater economy is combined than by any other known method. The patentee has erected a machine near his office, where he invites (by appointment) experienced and practical miners, engineers, chemists, metallurgists, and all others interested, to inspect its results. Every facility will be given for experiments upon different ores, and all other substances to be crushed.

For particulars, address—

A. B. CHILDS,
No. 481, NEW OXFORD STREET, LONDON, W.C.

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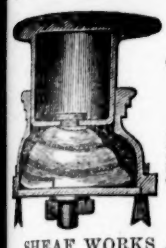
THOMAS TURTON AND SONS,



MANUFACTURERS OF
CAST STEEL for PUNCHES, TAPS, and DIES, TURNING TOOLS, CHISELS, &c.
CAST STEEL PISTON RODS, CKANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION.

DOUBLE SHEAR STEEL	FILES MARKED
BLISTER STEEL,	T. TURTON.
SPRING STEEL,	EDGE TOOLS MARKED
GERMAN STEEL,	WM. GREAVES & SON.

Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

SHEAF WORKS AND SPRING WORKS, SHEFFIELD.

LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.,
Where the largest stock of steel, files, tools, &c., may be selected from.

OWENS AND CO. (LATE CLINTON AND OWENS),

WHITEFRIARS STREET, FLEET STREET, LONDON, E.C.,
HYDRAULIC AND GENERAL ENGINEERS,
MANUFACTURERS OF PUMPS OF EVERY DESCRIPTION FOR HAND, HORSE, STEAM, OR WATER POWER

BORING TOOLS OF ALL DESCRIPTIONS, for Testing Ground and for Artesian Wells.
PORTABLE, SINGLE, and DOUBLE BARREL, and other PUMPS, and PORTABLE STEAM ENGINES.
CRABS, CRANES, PULLEY BLOCKS, and HOISTING TACKLE.

ANY OF THE ABOVE CAN BE HAD ON HIRE OR PURCHASE.

Full information, Drawings, Price Lists, &c., relating to the above, and to Hydraulic Machinery of all descriptions—Crabs, Pulleys, Blocks, and Hoisting Tackle of superior manufacture—may be had on application.

161

THOS PRENTICE & Co.

EMIT NO SMOKE — MAKE LITTLE RECOIL

PATENT SAFETY GUN COTTON CARTRIDGES & CHARGES

82. CRACECHURCH ST E.C.

GUN COTTON

Is the safest and STRONGEST EXPLOSIVE For every description of MINING AND QUARRYING WORK.

A charge of any given size exerts six times the explosive force of gunpowder. The enormous power confined in a short length at the bottom of the hole allows of a much greater amount of work being placed before each blast, saving considerably in the labour of drilling.

Charges are made of every diameter required, the length varying with the diameter. Any number may be placed in a hole. Each charge is fully equal to one ounce of a pound of powder.

MANUFACTURED BY
THOMAS PRENTICE AND CO., 82, GRACECHURCH STREET, LONDON.
WORKS, STOWMARKET.
LONDON AGENT,—MR. THORNE.

162

BRANDY, BRANDY, PURE BRANDY,
DIRECT FROM CHARENTE.

A CERTAIN CURE for CHOLERA, spasmodic symptoms, and internal complaints, when unadulterated; but how seldom to be met with in its pure state, unless from the direct importers, C. DEVEREUX and Co., 26, EAST INDIA CHAMBERS, LEADENHALL STREET, LONDON, at 36s., and for "première quality," 42s. per dozen, either pale or brown, bottles and case included. Forwarded same day against Post-office order or remittance.

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IMMENSE SAVING OF LABOUR.

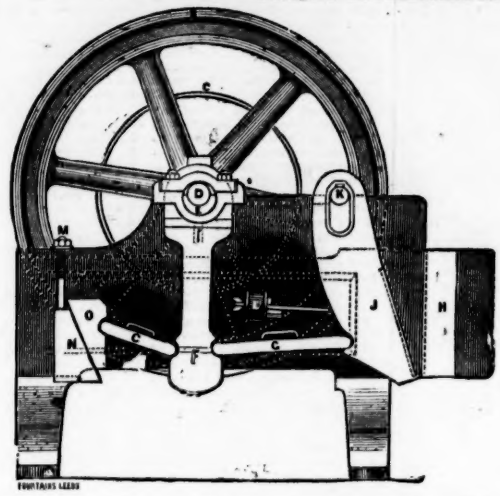
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, McADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER.

OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
For the Parys Mining Company, JAMES WILLIAMS.
H. R. Marsden, Esq.

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given very satisfaction. Some time after starting the machine a piece of the moveable jaw's about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
H. R. Marsden, Esq. — THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly,—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. MESSRS. ORD and MADDISON,
Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.
— JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,

MEADOW LANE, LEEDS,
ONLY MAKER IN THE UNITED KINGDOM.

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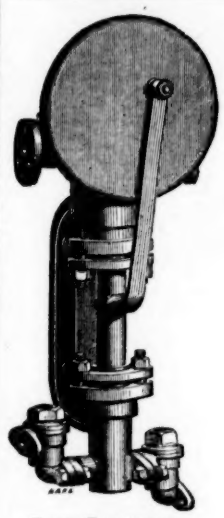
THE NEW PATENT INJECTOR,

FOR FEEDING BOILERS AND RAISING WATER FOR OTHER PURPOSES.

BY ROYAL LETTERS PATENT, No. 1539, DATED 2d JUNE, 1866.



FRONT ELEVATION.

PRICES, DELIVERED IN LONDON:—

Size.	Ram. in.	Stroke. in.	Approx. horse-power boiler supplied.	Approximate gallons thrown per hour. At 100 rev.	150 rev.	200 rev. p. min.	Price.
No. 4	1¼	3	15	115	172	230	£10 10
5	1⅞	3	22	180	270	360	12 12
6	1⅞	4	30	240	360	480	14 14
7	2¼	4	40	345	517	690	17 0
8	2¼	5½	55	475	712	950	19 10
9	2½	5½	75	585	877	1170	22 10
10	2½	6¾	90	720	1080	1440	25 10
11	2¾	6¾	110	870	1305	1740	28 10
12	2¾	8	120	1030	1545	2060	31 10
*14	3	8	230	2450	3675	—	40 0
*16	3¼	8	460	4900	7350	—	55 0

* The two last are double-acting.

Steam Regulator Valves, and also Check Valves, specially made to suit these Engines, can be supplied.

Terms Nett Cash on Delivery.

Each Injector is guaranteed to work efficiently, and any one failing to give satisfaction may be returned.

A CIRCULAR, WITH FULL EXPLANATION AND COMPARISONS, WILL BE SENT ON APPLICATION.

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BROWN, WILSON, AND CO.

No. 80, CANNON STREET, E.C.; AND VAUXHALL IRONWORKS, S., LONDON.

PARIS EXHIBITION, 1867.—AWARDED THE ONLY FIRST-CLASS MEDAL FOR CRUCIBLES.

SILVER MEDALS CLASSES 40—47.

THE PATENT PLUMBAGO CRUCIBLE COMPANY.

SOLE MANUFACTURERS UNDER MORGAN'S PATENT,

BATTERSEA WORKS, LONDON, S.W.

These Crucibles (MORGAN'S PATENT) *were the only ones to which Prize Medals were awarded in London*, 1862; *Dublin*, 1865; *New Zealand*, 1865; *and Oporto*, 1865.

They have been in use for many years in the English, Colonial, French, and other Foreign Mints; the English, French, and other Arsenals; and have been adopted by most of the large Engineers, Founders, and Refiners at Home and Abroad.

The capabilities which have now for more than twelve years distinguished these Crucibles are the following:—

Their quality is uniform. They withstand the greatest heat without danger. Their average durability for Gold, Silver, Copper, and other ordinary metals is forty to fifty pourings, in some cases reaching one hundred. They never crack, and heat more rapidly than any other kind. One annealing only is required. Change of temperature has no effect. They can when hot from the furnace be dipped in cold water with safety. The saving of labour and metal is very great. In *Steel Melting* the saving of fuel has been denomstrated to amount to a ton and a half to every ton of steel used. For *Zinc* they last longer than iron pots, and save the great loss which arises from mixture with iron. Those for *Malleable Cast-iron* show an average working of seven days, doing each day nearly double the work of any other crucible.

As these crucibles last much longer than any others, it follows that the saving of metal must be great, because to each worn crucible a quantity of metal adheres. In fact, comparing these with other crucibles, the saving of *metal* and *fuel* is more than equivalent to *their cost*.

A are made in sizes varying from 2 ozs. to any required capacity, and are marked by the quantity of kilogrammes they will contain; thus No. 100 will contain 100 kilogrammes.
B differ in shape, but correspond in all other respects with *A*, and are similarly marked.
C are marked in English pounds—thus, a crucible marked 60 will contain 60 lbs.
D are made expressly for steel in various sizes.

CRUCIBLES MADE TO ANY SHAPE AND SIZE TO ORDER.

Some unprincipled manufacturers having made such close imitations of our Trade Mark as cannot fail to deceive the public, we have deemed it advisable to alter our Mark as here shown. It will be observed that the alteration consists in the OMISSION of the words—"DEPOTS AT PARIS AND ROTTERDAM," and the ADDITION of the words—"MORGAN'S PATENT."

MORGAN'S PATENT PLUMBAGO CRUCIBLE COMPANY * BATTERSEA WORKS LONDON

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In all future orders, please specify "MORGAN'S PATENT," and address to

BATTERSEA WORKS, LONDON, S.W.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, c, Cheshire*	10 0 0	—		8 17 8	0 5 0	July 1867
200	Botallack, t, c, St. Just	91 5 0	180		488 15 0	5 0 0	May 1866
4000	Brookwood, l	1 11 0	—		0 5 0	0 2 6	Sept. 1866
1000	Bronfloyd, l, Cardigan*	12 0 0	—		8 7 0	0 6 0	Aug. 1867
6400	Cashwell, l, Cumberland*	2 10 0	—		0 1 6	0 1 6	Aug. 1866
916	Cargoll, s-l, Newlyn	15 5 7	—		13 15 0	1 0 0	Feb. 1866
1867	Cwm Erfin, l, Cardiganshire*	7 10 0	—		23 18 0	1 0 0	June 1867
128	Cwmystwith, l, Cardiganshire	60 0 0	—		379 10 0	3 0 0	April 1867
280	Derwent Mines, s-l, Durham	300 0 0	—		174 10 0	5 0 0	June 1867
1024	Devon Gt. Consols, c, Tavistock†	1 0 0	425	415 425	1074 0 0	7 0 0	Sept. 1867
656	Ding Dong, t, Gulval‡	49 14 6	20		0 10 0	0 10 0	Sept. 1867
358	Dolcoath, c, t, Camborne	128 17 6	—		831 10 0	3 0 0	Aug. 1867
6144	East Caradon, c, St. Cleer†	2 14 6	—		14 11 6	0 2 0	July 1867
300	East Darren, l, Cardiganshire	32 0 0	—		146 10 0	2 0 0	July 1867
128	East Pool, t, c, Pool, Illogan	24 5 0	—		412 10 0	5 0 0	Sept. 1867
5000	East Rosewarne, c, t, Gwinear	2 15 0	—		0 10 6	0 1 6	Jan. 1866
1906	East Wheal Lovell, t, Wendron	3 9 0	8½	8 8½	3 1 6	0 6 8	Aug. 1867
2800	Foxdale, l, Isle of Man*	25 0 0	—		70 10 0	0 10 0	June 1867
5000	Frank Mills, l, Christow	3 18 6	—		3 5 6	0 5 0	Feb. 1866
15000	Great Laxey, l, Isle of Man*	4 0 0	18⅛	18 19	7 5 0	0 10 0	Sept. 1867
5908	Great Wheal Vor, t, c, Helston†	40 0 0	18	17½ 18½	12 0 6	0 7 6	Sept. 1867
1024	Herodsfoot, l, near Liskeard†	8 10 0	37	36 38	42 0 0	1 10 0	June 1867
6000	Hingston Down, c†	5 10 6			0 10 0	0 5 0	April 1866
400	Lisburne, l, Cardiganshire	18 15 0	—		492 10 0	3 0 0	May 1867
3000	Maes-y-Safn, l*	20 0 0	—		2 0 0	1 0 0	Sept. 1867
9000	Marke Valley, c, Caradon	4 10 6	5¾	5¾ 6	3 17 0	0 3 0	July 1867
3000	Minera Boundary, l, Wrexham*	1 0 0	—		0 13 0	0 3 0	Mar. 1866
1800	Minera Mining Co., l, Wrexham*	25 0 0	160	190 200	218 18 0	6 5 0	Aug. 1867
20000	Mining Co. of Ireland, c, l, cl	7 0 0	—		—	0 5 7	Jan. 1867
40000	Mwyndy Iron Ore*†	3 5 0	—		0 6 6	0 2 6	Mar. 1866
200	Parys Mines, c, Anglesey*	50 0 0	—		157 10 0	5 0 0	Jan. 1866
12800	Prince of Wales, t, Calstock	0 12 6	48s.	2½ 2⅝	0 2 6	0 2 6	Aug. 1867
6000	Prosper United, t, c, St. Hilary	8 14 0	2⅞	2¾ 3	0 5 0	0 5 0	Feb. 1867
1120	Providence, t, Uny Lelant†	10 6 7	31	29 31	83 7 6	0 10 0	Aug. 1867
512	South Caradon, c, St. Cleer†	1 5 0	400	380 400	562 10 0	6 0 0	July 1867
6000	South Darren, l*	3 6 6	—		0 7 1	0 1 6	July 1867
496	So. Wh. Frances, c, Illog.†‡	18 18 9	37½	37½ 40	371 13 6	1 0 0	Sept. 1867
508	Summer Hill, Mold	3 13 6	—		0 15 0	0 5 0	Sept. 1867
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	13½	13 14	18 16 0	0 5 0	Aug. 1867
2000	Trumpet Cons., t, Helston	11 10 0	—	11½ 12	11 12 6	0 7 6	Aug. 1867
3000	W. Chiverton, l, Perranzabuloe	10 0 0	66	64 65	21 7 6	2 0 0	Aug. 1867
400	West Wheal Seton, c, Camborne†	47 10 0	165	150 160	476 10 0	3 10 0	Aug. 1867
512	Wheal Basset, c, Illogan†	5 2 6	77½	80 85	625 0 0	2 0 0	Aug. 1867
1024	Wheal Friendship, c, Tavistock	20 0 0	—		300 10 0	0 10 0	Nov. 1866
4295	Wheal Kitty, t, St. Agnes	5 4 6	—		3 1 0	0 2 0	Feb. 1867
1024	Wheal Mary Ann, l, Menheniot†	8 0 0	18	16½ 17½	62 10 0	0 15 0	Sept. 1867
2030	Wheal Rose, c, Scorrier	—	—		1 0 0	0 10 0	Feb. 1866
396	Wheal Seton, t, c, Camborne	58 10 0	117½	102½ 107½	246 15 0	2 10 0	Aug. 1867
1040	Wheal Trelawny, s-l, Liskeard†	5 17 0	—		54 14 6	0 4 0	June 1867
3000	Whitewell Lead, Clitheroe*	0 5 0	—		0 10 0	0 10 0	July 1867
17000	Wicklow, c, s, Wicklow	2 10 0	—	19¾	46 15 0	1 0 0	April 1867

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
25000	Alamillos, l, Spain*†	2 0 0	1	¾ 1¼	0 1 0	0 1 0	Sept. 1867
20000	Australian, c, South Australia†‡	7 7 6	—		0 1 0	0 1 0	Aug. 1867
15000	Cape Copper Mining*†	7 0 0	7¼	7	2 12 6	0 10 0	April 1866
76000	Don Pedro No. del Rey, Brazil*†‡	0 14 0	2¾	2½ 2¾	0 7 9	0 3 6	Aug. 1867
24000	Fortuna, l, Spain*†	2 0 0	—		1 7 4	0 2 0	Sept. 1867
20000	Gen. Mining Assoc., Nova Scotia†	20 0 0	18	15 17	23 19 0	0 15 0	June 1867
10000	Gonnesa, l,* [5000 £5 pd., 5000 £4 pd.]	—	—		10 per cent.		July 1867
15000	Linares, l, Spain*†	3 0 0	—		11 8 4	0 5 0	Sept. 1867
50000	Panulcillo, c*†	3 0 0	2¾	2½ 3	10 per cent.		Yearly.
6000	Peel River Land and Mineral*†	—	—		—	—	
30000	Pestarena, g*†	2 10 0	2⅞	2⅝ 2⅞	0 2 6	0 2 6	Mar. 1867
10000	Pontgibaud, s-l, France†	20 0 0	—		4 14 3	0 11 0	June 1867
100000	Port Phillip, g, Clunes†	1 0 0	1⅜	1⅛ 1¼	0 17 6	0 1 0	Aug. 1867
12000	Scottish Australian Mining Co.†	1 0 0	1⅛	1 1⅛	7⅛ per cent.		Mar. 1867
11000	St. John del Rey, Brazil*†	15 0 0	60	59 61	77 5 0	4 10 0	June 1867
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 0	0 1 0	Jan. 1866
40000	West Canada Mining Company*	1 0 0	—		0 19 6	0 2 6	May 1866

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
100000	Anglo-Brazilian, g*†	0 10 0	¾	½ ⅝	Nov. 1866
12500	Anglo-Italian, g*†	0 5 0	—	⅛ ¾	May 1867
40000	Brittany Silver-Lead Mines, France* [15750 18s. pd.]	—	—		
2464	Burra Burra, c, South Australia‡	5 0 0	—		
25000	Capula, s, Mexico*†	1 12 0	—		Aug. 1866
30000	Chontales, g, s, Nicaragua*†	4 0 0	5	5 5⅛	June 1867
12000	Cobre Copper Company, c, Cuba†‡	43 10 0	—		May 1867
10000	Copiapo Mining Company, Chili†‡	16 10 0	—		
10000	Copiapo Smelting, Chili*	10 0 0	—		April 1866
300	Copper Miners' Co. of South Australia* [150 £100 pd., 150 £70 pd.]				Nov. 1866
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—		Nov. 1866
8000	English and Canadian Mining Company*	5 0 0	—		Fully pd.
40000	Fortune Copper Mining Co. of Western Australia	2 0 0	—		Fully pd.
30000	Frontino and Bolivia, g, New Granada*†	1 15 0	15s.	13s. 15s.	June 1867
10000	Great Barrier Land, Mining, &c., New Zealand	5 0 0	—		Fully pd.
8000	Great Northern, c, South Australia†	1 11 6	—		Sept. 1862
65000	Kapunda Mining Co., Australia†‡	1 0 0	—		
7927	Lusitanian (Portugal)†‡	3 0 0	—		
83030	Mariquita	0 12 6	—		Jan. 1867
12500	Nerbudda Coal and Iron** [6000 £3 pd., 6500 £4 pd.]	—	—		Aug. 1865
31000	New Quebrada, c, Venezuela**	3 10 0	—	1 1¼	
30000	Nova Scotia Land and Gold*	1 15 0	—		Sept. 1865
15000	Otea, c, New Zealand*	2 0 0	—		Fully pd.
20178	Rhenish Consolidated, l [8000 £3 pd., £178 £2 10s. pd.]	—	—		May 1866
100000	Rossa Grande, g, Brazil**	0 10 0	—		June 1867
15000	San Pedro del Monte, s, Mexico*	4 0 0	—		Sept. 1866
10000	San Roque, l, Spain	5 0 0	—		Fully pd.
200000	Taquaril, g, Brazil*	0 2 6	—		Sept. 1867
6000	Terreseu, s-l, Isle of Sardinia	2 0 0	—		
43174	United Mexican, s, Mexico*‡	28 3 0	2¼	1¾ 2¼	
10000	Vancouver, g*†‡	6 0 0	—		
6000	Val Sassam, s, c, l**	7 0 0	—		Jan. 1867
45000	Victor Emanuel, c, Italy*	1 0 0	—		Fully pd.
20000	Washoe, g*	5 0 0	—		Fully pd.
8000	Worthing, c, South Australia**	1 0 0	—		Fully pd.
25000	Yorke Peninsula, South Australia	1 0 0	—		Fully pd.
45000	Yudanamutana, c, S. A.*‡	3 0 0	1⅛	¾ 1	Fully pd.

BANKS AND FINANCIAL COMPANIES.

Shares.	Banks.	Paid.	Last Pr.	Bus. done.
40000	Alliance**	25 0 0	—	15
30000	Australasia*	40 0 0	67	
10000	Bank of Egypt*	25 0 0	—	32 34
30000	Bank of New Zealand*	10 0 0	—	
25000	Bank of Otago**	10 0 0	—	
20000	Bank of Victoria, Australia*	25 0 0	—	
20000	British North American*	50 0 0	—	
50000	Canadian Loan and Investment**	2 10 0	—	
40000	Chartered Bank India, Australia, and China*	20 0 0	—	
30000	Chartered Merc. of India, London and China*	25 0 0	—	
50000	City*	10 0 0	—	12⅝ 12¾
20000	Colonial*	25 0 0	—	
40000	Company of African Merchants.**	3 0 0	—	
200000	Consolidated Bank**	10 0 0	—	
200000	Credit Foncier and Mobilier of England**	9 0 0	3⅝	3¼ 3½
20000	East London**	5 0 0	—	
30000	English, Scottish, & Aust., Chart.*	20 0 0	17⅝	
20000	English and Swedish**	25 0 0	—	
20000	Imperial Bank**	20 0 0	—	
202500	Imperial Ottoman*	10 0 0	9¼	8⅞ 9
300000	International Land Credit**	6 0 0	—	
50000	London Chartered Bank of Australia*	20 0 0	—	24¼
37500	London and County*	20 0 0	55	54½ 55
40000	London Financial Association**	30 0 0	—	
72000	London Joint-Stock*	15 0 0	36½	37 38
5000	London and River Plate**	40 0 0	—	
20000	ditto ditto New, issued at 1½ prem.**	10 0 0	—	
20000	ditto ditto New**	10 0 0	—	
10000	London and South-Western*	20 0 0	—	
5000	London and Venezuela**	12 10 0	—	
30000	London and Westminster*	20 0 0	68¾	68
30000	Mercantile and Exchange**	12 10 0	—	
10000	Merchant**	20 0 0	—	
5000	ditto New**	20 0 0	—	
27150	Metropolitan and Provincial**	20 0 0	—	
5000	Midland**	20 0 0	13¾	13½
20000	National of Australia*	4 0 0	—	
20000	National of Liverpool**	15 0 0	—	
10000	National Provincial of England*	42 0 0	—	
20000	ditto ditto 2d and 3d issue*	12 0 0	80	
40000	National*	30 0 0	—	
20000	New South Wales*	20 0 0	—	
60000	Oriental Bank Corporation*	25 0 0	—	
27210	Provincial Banking Corporation**	10 0 0	4	3 5
20000	Provincial of Ireland*	25 0 0	—	
10000	ditto ditto New*	10 0 0	—	
40000	Union of Australia*	25 0 0	48¾	47 49
10000	Union of Ireland**	22 0 0	—	
60000	Union of London*	15 0 0	37½	36 38

PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
4000	Ballacorkish, I. of Man, l, c*	3 0 0	—		Aug. 1867
3000	Bedford Unit., c, Tavistk.*	2 6 8	—		
1031	Bedol Aur, l, Holywell	1 12 0	—		May 1867
500	Billins, l, Flint	30 0 0	—		Fully pd.
1248	Boscaswell, t, c, St. Just	7 6 0	—		Dec. 1866
2500	Bosworthen and Penzance	4 0 0	—		July 1867
5000	Bottle Hill, t, Plympton	1 14 6	—		June 1866
1000	Blaendyffryn, s-l	5 0 0	—		
200	Brynford Hall, l, Flint	28 0 0	—		Jan. 1866
5000	Bryn Gwiog, l, Flint	0 18 0	1¼		June 1864
1200	Bryn Gwyn, l, Mold*‡	9 0 0	—		
1000	Budnick Consols, c, t	—	—	½ ¾	
5094	Bwlch Consols, s-l	4 0 0	—		
6000	Bwadrain Consols, s-l	3 0 0	—		
30000	Caldbeck Fells, l, Cumber.*	1 10 0	—		Dec. 1866
1000	Camborne Consols, c	18 10 0	—		Feb. 1864
4600	Camborne Vn.&Wh.Frn., c	11 14 7	—		July 1867
11000	Cape Cornwall, t, c* [8000 £2 10s. pd., 3000 10s. pd.]				Oct. 1866
914	Caradon Cons., c, St. Cleer	32 13 6	—		Aug. 1867
1000	Carn Brea, c, t, Illogan‡	28 0 0	10		May 1867
6000	Carn Camborne, c, Cambn.	2 2 0	—		July 1867
5000	Carnarvonshire, l*	4 0 0	—		Fully pd.
4005	Cardigan Cons.*	5 0 0	—		Fully pd.
600	Cardiganshire, l*	17 10 0	—		Sept. 1866
20000	Carysfort [3200 £2½ pd., 16800 £1⅜ pd.]				Mar. 1865
2500	Cefn Cilcen, l, Flint*	2 18 0	—		Aug. 1866
2500	Central Minera, l*	3 17 6	—		June 1867
16000	Central Snailbeach l*	1 0 0	—		Fully pd.
3000	Chiverton, l, Perranzabu.	9 7 6	7	6¾ 7	May 1867
3000	Chiverton Moor, l, Perranz.	6 8 6	5⅝	5½ 5¾	Aug. 1867
4000	Clara, Llywernog	2 16 6	—		May 1867
2880	Clifford Amalg., c, Gwen.‡	33 17 6	8	7¼ 7¾	June 1867
2048	Colquite & Callington Un.	0 5 0	—	2 2½	Sept. 1867
256	Condurrow, c, t, Camborne‡	76 10 0	—		
50000	Connorree, c, sul, Wicklow*	1 0 0	—	9s.	Fully pd.
2450	Cook's Kitchen, c, Illogan‡	19 14 9	11	9¾ 10¼	July 1866
1024	Copper Hill, c, Redruth‡	12 10 0	—		June 1866
6885	Cornish Clay and Tin	1 0 0	—		Fully pd.
1055	Craddock Moor, c, St. Cleer‡	12 12 0	5		Sept. 1867
861	Crane, c, Camborne	33 9 6	—		Dec. 1866
12000	Crelake, c, Tavistock	3 12 0	—		June 1867
6000	Cuddra, t, St. Austell	5 5 0	—		Sept. 1867
35000	Dale, l, North Stafford	1 0 0	—		Fully pd.
4000	Devon Wheal Frances, c	1 6 5	—		Sept. 1867
1024	Dev. Wh. Lopes, Bickleigh	18 10 0	—		Mar. 1867
12800	Drake Walls, t, Calstock‡	2 5 0	¾	12s. 14s.	Dec. 1866
25000	Dundalk, Ireland, l*	0 15 0	—		Feb. 1867
3000	Dyfngwm, l, Wales	13 7 0	—		June 1866
740	Eaglebrook, l*	19 15 0	—		July 1866
512	East Basset, c, Redruth†‡	31 10 0	17½	16 18	July 1867
1000	East Basset and Grylls, t	3 5 0	—		July 1865
6000	E. Bottle Hill, t, Plympton	0 9 6	—		May 1867
4096	East Brookwood, Holne	2 8 8	—		July 1866
6000	E. Carn Brea, c, Redruth‡	3 15 0	3	2½ 2¾	
4000	East Chiverton, l, Perranz.	2 14 3	—		July 1867
6000	E. Grenville, c, Camborne	3 9 6	2¼	2⅛ 2¼	Aug. 1867
4000	E. Gunnislake & S. Bed. c.	10 10 0	—		Sept. 1867
6000	East Laxey, l, Isle of Man	2 15 0	5½		Dec. 1866
6000	East Neptune, c, Marazion	—	—		
3986	E. Providence, t, Uny Lel.	5 4 9	—		Aug. 1867
6000	East Snaefell, l, I. of Man*	2 0 0	—		Dec. 1864
5610	East Seton, c, Camborne	0 13 6	—		May 1867
9000	E. St. Just, t* [6000 £3 10s. pd., 3000 £1 10s. pd.]				Nov. 1866
256	East Tolgus, c, Redruth	96 0 0	—		April 1866
1190	E. Wh. Agar, c, St. Cleer	12 17 0	—		Jan. 1865
5000	E. Wh. Rose Con., l, Per.*	2 0 0	—		
4000	E. Wh. Russell, Tavistock†	12 5 6	2	1¾ 2	July 1867
6000	Fortescue Consols, c	0 12 6	—		
940	Fowey Con., c, Tywardreath‡	5 4 6	—		Feb. 1867
6000	Furze Hill Wood Con. Buckl.	1 16 0	—		Feb. 1866
10000	Fursdon, c* [5000 £1 10s.]	—	—		Mar. 1865
4096	Garlidna Unit., t, Wendron	5 7 7	—		Feb. 1866
4000	Gawton, c, Tavistock	3 10 6	3		May 1867
6000	Gen. Min. Co. for Ireland, c	5 10 0	—		
40000	Glasgow Caradon c* [30000 £1 pd., 10000 10. pd.]				Sept. 1866
5700	Goginan, l	12 10 0	—		April 1864
6144	Gonamena, c, St. Cleer	6 2 6	—		Aug. 1867
6000	Gothic, s-l, Cardigan*	2 10 0	—		Fully pd.
486	Grambler and St. Aubyn†‡	71 0 0	—		Mar. 1867
10000	Great Cwmsymlog, s-l*	1 15 0	—		July 1867
4096	Great Caradon, c, St. Ive	3 15 0	—		May 1867
3000	Great Chiverton, s-l*	1 0 0	—		May 1867
3000	Gt. East Lovell, t, Helston	2 1 0	—		Nov. 1866
5000	Great Mona, l, Isle of Man*	4 0 0	—		June 1867
5000	Great North Downs, c	6 13 0	4½	4⅜ 4⅝	Feb. 1867
12500	Gt. No. Laxey (Isle of Man)*	0 15 0	—		July 1867
1000	Great North Tolgus, c	10 0 0	11¼		Sept. 1867
1000	ditto	1 0 0	2¼		Sept. 1867
4800	Great Retallack, s-l, b	2 4 0	4½	4 4¼	July 1867
6000	Great South Chiverton, s-l	1 7 6	—		Aug. 1867
6000	Gt. So. Tolgus, c, Redruth	1 4 0	—	⅜ ¾	June 1867
3313	Great Wheal Baddern, t	7 17 6	—		June 1863
1798	Gt. Wh. Fortune, t, Breage	29 5 6	—		July 1867
119	Great Work, t, Germoe	100 0 0	—		
10240	Gunnislake (Clitters'), t, c	4 19 0	—		April 1867
6068	Gwydyr Park, l, Llanrwst	1 14 0	—		Sept. 1867
6000	Hallenbeagle, c, Kenwyn	2 17 0	—		April 1867
6400	Harwood, l, Durham*	0 6 0	—		Sept. 1864
5000	Havan, l, Cardigan*	4 15 0	—		Mar. 1866
6000	Lady Bertha, c, Tavistock	4 4 0	—		May 1867
1019	Leeds and St. Aubyn, t, c	19 13 4	—		Mar. 1866
160	Levant, c, t, St. Just	10 8 1	—		June 1866
1024	Lovell Consols, t	0 10 0	—		
6000	Maudlin, c, Lostwithiel	4 7 0	—		May 1865
6000	Mid-Wales, s-l,*	1 10 0	2¼		Aug. 1867
640	Mount Pleasant, l, Mold	4 0 0	—		
1024	Nangiles, t, c, Kea	28 0 0	—		May 1867
12800	Nether Hearth* [6400 £1 pd., 6400 2s. pd.]				
6000	New Birch Tor & Vitifer, t‡	1 13 6	—		Oct. 1866
6000	New Clifford, c, Gwennap*	2 10 0	—		May 1867
24000	New Cornish [12000 £1 pd., 12000 15s. pd.]				Sept. 1866
6400	N. Crow Hill, l, St. Stephen	3 4 0	—		Sept. 1867
6514	New E. Russell, c, Tavistk.	0 12 6	—		Sept. 1867
400	New Hendra, t, c, Breage	14 11 0	—		Mar. 1866
6400	New Pembroke, t, c	1 4 6	—		July 1867
5755	New Treleigh, c, Redruth	4 8 0	—		May 1866
960	New Trevenen, t, Wendron	8 14 0	—		May 1866
3729	New Wheal Lovell, t	1 18 0	—		Aug. 1867
400	New Wh. Seton, c, Cambn.	58 10 0	—		Aug. 1867
2000	New Wheal Towan, c, t	1 10 0	—		July 1868
16000	North Devon, s-l*	0 17 0	—		July 1867
5000	No. Dolcoath, c, Camborne	4 3 0	—		Mar. 1867
3457	North Downs, c, Redruth	5 3 10	9s.	7s. 9s.	Sept. 1867
1361	No. Grambler, c, Redruth	7 13 3	—		Aug. 1867
16000	N. Hallenbeagle [8000 £1 pd., 8000 8s. 6d. pd.]				July 1865
6000	North Jane, t, s-l, Kenwyn	3 1 6	—		Mar. 1867
2000	North Levant, t, c, St. Just	10 12 0	—		April 1867
20000	Nth. Minera, l, Wrexham*	1 0 0	—		Fully pd.
4000	N. Phœnix, c, Linkinhorne	4 2 6	—		May, 1867
3933	North Pool, c, Illogan	5 16 0	—		Mar. 1867
1024	North Retallack Mine	2 0 0	—		Feb. 1867
695	No. Roskear, c, Camborne	53 14 0	—		Sept. 1867
1933	North Shepherds, l*	6 10 0	—		May 1867
3936	No. Treskerby, c, St. Agnes	1 9 0	2	33s. 35s.	Dec. 1860
6000	North Wheal Basset, c, t†	5 0 0	—		April 1866
5610	North Wheal Crofty, c†	3 11 3	4	3¾ 4	July 1866
3000	North Wh. Chiverton, l	4 0 0	4⅛	4 4⅛	Mar. 1867
6144	N. Wh. Robert, Smp. Spiney	4 8 11	—		Mar. 1867
12288	Okel Tor, c, Calstock	2 7 4	—		Aug. 1866
8000	Okehampton	1 10 0	—		
8000	Old Gunnislake, c, Calstock	2 15 0	—		Mar. 1867
3000	Old Westminster, Denbigh*	3 0 0	3¾		June 1867
6400	Par Consols, c, St. Blazey†‡	2 12 0	—		July 1867
8465	Pedn-an-drea, t, Redruth	6 2 6	—		May 1867
3000	Pendeen Consols, c, St. Just	6 7 0	—		Aug. 1867
3335	Penhale Wheal Vor, t, c	3 12 6	—		July 1867
3000	Penhalls, t, St. Agnes	3 0 0	—		May 1866
1772	Polberro, t, St. Agnes	15 0 0	—		Fully pd.
512	Polbreen, t, St. Agnes	8 0 0	—		Aug. 1860
10000	Prince Arthur Consols, l*	2 0 0	—		Fully pd.
12000	Redmoor, c, t, Callington	1 13 6	—		Aug. 1867
6000	Reinnie Laxey, l, I. of Man*	4 0 0	—		Feb. 1867
1024	Rose and Chiverton Un., l	5 0 0	7	6⅛ 6⅝	Nov. 1866
2000	Rosecliff and Tolcarne, l*	9 0 0	—		April 1867
3973	Rosewarne Consols, c	5 2 6	—		Feb. 1866
3915	Rosewall Hill & Ransom, c	3 0 0	—		Aug. 1866
3848	Rosewarne United, c, t	4 3 0	—		June 1867
10000	Shropshire Copper, c*	2 10 0	—		Fully pd.
20500	Snaefell, l, Isle of Man*	1 0 0	—		Fully pd.
400	Silver Brook, s-l, Carmar.*	10 0 0	—		July 1868
4096	Sithney Wheal Metal, t	4 3 6	—		Oct. 1866
12000	Sortridge Cons., c, Tavist.†	1 14 6	—		Oct. 1866
512	South Basset, c, Gwennap	25 10 0	—		June 1867
3000	So. Chiverton, s, l, Perran.	3 15 0	—		June 1866
6138	So. Condurrow, t, c, Camb.	3 15 6	¾	⅛ ⅝	May 1867
2283	South Crenver, c, Crowan	12 9 0	—		Oct.
1024	South Devon, c & l	3 0 0	—		
6000	S. Dolcoath & Carnarth. Con.	2 16 6	—		Aug.
5000	So. Exmouth, l, Christow	2 17 0	—		Feb.
6000	So. Fowey, c, Tywardreath	0 10 0	—		April
1024	So. Herodsfoot, l, Liskeard	10 15 0	—		July
30210	South of Scotland, c*	0 17 6	—		Sept.
3000	South Trevenna, c, t	2 0 0	—		Dec.
937	So. Wh. Crofty, c, Illogan	24 10 10	16	16 16⅛	Feb.
6000	South Wheal Grenville, t, c	1 0 6	—		Sept.
400	So. Wh. Seton, c, Camborne	78 13 0	—		July
512	South Tolgus, c, Redruth	9 10 0	—		Aug.
59	Spearne Consols, t, St. Just	16 17 6	—		May
242	Spearne Moor, t, St. Just	6 2 0	—		Dec.
940	St. Ives Consols, t, St. Ives‡	10 15 0	7	5⅛ 6	Nov.
673	St. Ives Wheal Allen, t	18 18 7	—		Aug.
9000	St. Just Cons. t [6000 £1 pd., 3000 10s. pd.]				Sept.
7000	Stiperstones, l, Salop*	5 0 0	—		Mar.
920	Stray Park, c, t, Camborne†‡	43 6 8	—		July
6000	Tamar Valley, s-l	0 5 0	10s.	8s. 10s.	Nov.
3500	Tin Hill, t, St. Austell	1 8 0	—		Jan.
6000	Tolcarne, c, Camborne	3 1 6	—		July
548	Trelyon Consols, t, St. Ives	16 0 0	—		Dec.
501	Tresavean and Trethurrup	16 11 0	—		July
4440	Trevenen & Tremenheere	7 11 0	—		June
4096	Treweatha, s-l, Menheniot	7 17 0	—		Mar.
1943	Treworlis, t, Wendron	11 15 4	—		Feb.
6400	Tyne Head, t, c*	0 18 0	—		Jan.
4200	Vigra and Clogau, c, Dolg.*‡	5 0 0	—		Fully
2500	West Briton, c, Crowan	1 0 0	—		
6000	West Basset, c, Illogan†‡	1 15 0	—		Mar.
1024	West Caradon, c†‡	17 0 0	9½		July
1319	West Cwm Erfin, l* [319 £4 paid]		—		April
2850	W. Condurrow, t, c, Cam.	12 11 3	—		Aug.
256	West Damsel, c, Gwennap	38 10 0	—		
12800	West Drake Walls, c	0 2 6	—		Mar.
2582	West Great Work, t	5 11 0	3¾	3¼ 3¾	June
5000	West Godolphin, t, c	—	4½	4 4½	
12000	W. Maria & Fortes., c, Lam.	3 10 0	—		June
6000	Westminster, l*	5 0 0	—		Fully
12800	West Prince of Wales, c	0 10 0	—		
1000	West Rose Down, c, Linkin.	19 5 0	—		July
6000	West St. Ives, t, c	0 1 0	¾	11s. 13s.	Oct.
512	West Tolgus, c, Redruth	54 10 0	25		July
4096	West Tremayne, c, St. Erth	0 4 0	—		Aug.
512	W. Wh. Frances, t, Illogan	105 15 0	—		May
5000	W. Wh. Kitty, t, St. Agnes	2 17 6	⅞	⅝ ¾	May
6000	Wheal Agar, c, Illogan	7 8 6	—		July
6000	Wheal Alice Alfred, t, c	2 0 0	—		Feb.
1000	Wheal Basset and Grylls, t	7 18 6	—		Aug.
512	Wheal Buller, Redruth†‡	21 10 0	25	23 25	Mar.
6000	Wheal Crebor, c, Tavistock	2 4 0	—	6s. 8s.	Aug.
6144	Wh. Damsel, c, t, Gwennap	2 15 0	—		July
849	Wheal Emily Henrietta, c.	18 5 0	6		July
4000	Wh. Emma, c, Buckfastlei.	3 19 0	—		July
6000	Wheal Grenville, c, Camb.†	10 5 0	28s.	23s. 25s.	Sept.
6000	Wheal Ida, s-l, St. Ive	1 3 0	—		May
1024	Wh. Kitty, t, Uny Lelant†	3 10 6	—		
512	Wheal Jane, s-l, Kea	10 10 0	—		Sept.
896	Wh. Margaret, t, Uny Le.‡	13 17 6	7	5 6	
728	Wheal Margery, t, c	26 14 0	—		Aug.
100	Wheal Mary, t, Lelant‡	36 2 6	—		
6000	Wheal Mary Florence, c*	1 19 0	—		Feb.
1000	Wh. Mary Hutchins, c, Plym.	2 0 6	—		June
6000	Wh. Norris, t, c, St. Cleer	4 6 1	—		Sept.
80	Wheal Owles, t, St. Just‡	70 0 0	—		
6000	Wheal Sparnon, c, Redruth	3 6 0	—		May
1920	Wh. Trannack, c, Sithney	1 13 3	—		Jan.
1200	Wheal Trevenna, t, c*	9 10 0	—		April
4096	Wheal Uny, t, c, Redruth	10 9 6	—		July

MISCELLANEOUS.

60000	Anglo-American Telegr.*†	10 0 0	17⅛	17½ 17¾
20000	Anglo-Mexican Mint†	10 0 0	—	
600000	Atlantic Telegraph*†	100 0 0	29	27 29
600000	ditto 8 per cent.*†	100 0 0	75	72½
20000	Australian Agricultural†	20 10 0	—	
40000	Australian Mort. Land, &c.	5 0 0	—	
47000	Berlin Waterworks*†	10 0 0	—	
13000	ditto New*†	4 0 0	—	
25000	Bolckow, Vaughan*†	25 0 0	—	
8915	Canada Company†	32 10 0	—	
30000	Central American Assoc.*†	1 0 0	—	
27000	China Stm.-ship & Lab. Coal†	11 0 0	—	
30000	City Discount*†	3 0 0	—	
20000	City London Real Prop.*†	8 0 0	—	
35000	City of Moscow Gas*†	25 0 0	—	
15041	City of Milan Improv.*†	17 10 0	—	
4959	ditto ditto *‡	20 0 0	—	
20000	City Offices*†	25 0 0	—	7½
30000	Colonial*‡	15 0 0	—	
10000	ditto*†	22 10 0	—	
50000	Commercial Uni. (Insu.)†	5 0 0	—	4¾ 5
17500	Continental Union Gas*†	15 0 0	—	
2500	ditto ditto *†	20 0 0	—	
42000	Copper Miners of Eng.† [2000 £25 pd., 40000 £100 pd.]			
10000	Cred. Fonc. of Mauritius*†	10 0 0	—	
1002925	Crystal Palace†	100 0 0	26	
160820	ditto preference†	100 0 0	—	
277000	ditto 6 per cent. p.d.†	100 0 0	—	
20000	E. Indian Land, Credit*†	10 0 0	—	
5000	E. India Irriga. & Canal†	16 10 0	—	
80000	Ebbw Vale Iron Co.*†	27 10 0	—	
113813	Egyptian Com. & Tradg.*†	7 0 0	—	1¾
879975	Electric Telegraph †	100 0 0	—	
70000	Eng. and Australian, c‡	2 10 0	—	
20000	English and For. Credit*†	7 10 0	—	
25000	Fairbairn Engineering*†	5 0 0	4	
30000	Fore-street Warehouse*†	12 0 0	—	12¼ 12¾
200000	General Credit and Disc.*†	7 10 0	5½	
20000	General Stm. Navigation†	14 0 0	—	
4000	Hollybush Col. and Coke*	5 0 0	—	
100000	Hudson's Bay†	20 0 0	—	15 15¼
80000	Im. Land Co. Marsailles*†	11 10 0	—	
150000	International Financial*†	5 0 0	—	2⅞
50000	Italian Irrigation*†	20 0 0	3	
1000000	ditto 6 per cent.*†	100 0 0	—	
30000	Italian Land†	5 0 0	—	
20000	Land Securities*†	5 0 0	—	2⅛ 2¼
4000	London African Tradg.*†	10 0 0	—	
20000	Lon. & Caledon. Marine*†	5 0 0	—	
12060	London Dist. Telegraph*†	5 0 0	—	
148525	London Gen. Omnibus *†	4 0 0	2⅜	2¼ 2⅜
5000	London and Glas. Engt.*†	25 0 0	—	
64500	London & Prov. Marine*†	2 0 0	1¾	
50000	Madras Irrigation*†	100 0 0	102	101 103
10000	Marine Investment*†	6 5 0	—	
12500	Mauritius Land, Cred., &c.*†	2 0 0	—	
12000	Mediterranean Ex. Tel. *†	10 0 0	—	
9780	Merchant Shipping*†	50 0 0	—	
300000	Millwall Freehold Land*†	100 0 0	—	
40000	Millwall Ironworks*†	7 10 0	—	
25000	Mining Association*	1 0 0	—	
36500	Natal Land and Col. *†	5 10 0	—	1 1¼
160000	National Discount*†	25 0 0	11	10½ 10¾
20000	National Provin. Marine*†	2 10 0	—	
20000	National Steam Naviga.*†	30 0 0	—	
25000	New Consolidated Disct.*†	3 0 0	—	
20000	New Zealand Loan, &c. *†	2 10 0	—	
20000	New Zealand Trust, &c.*†	5 0 0	—	
40000	N. British & Merc. Insur.†	6 5 0	—	
15000	Northern Assam Tea*†	3 10 0	—	
25000	ditto B*†	9 0 0	—	
30000	Oriental Gas*†	5 0 0	—	
30000	ditto New*†	1 0 0	—	
25000	Otago and Southland*†	2 0 0	—	
20000	Peninsular and Oriental*†	50 0 0	—	
20000	ditto ditto New*†	50 0 0	49	48
100	Picksley, Simms and Co.	7 0 0	—	
10000	Rhymney Iron*†	50 0 0	—	
10000	ditto New*†	50 0 0	—	
15000	Royal Mail Steam*†	60 0 0	—	
300000	Scottish Austra. Invest.*†	100 0 0	—	
14200	South Australian Land*†	25 0 0	—	
280000	Submarine Telegraph*†	100 0 0	—	
—	ditto Scrip*†	1 0 0	—	
100000	Thames & Mersey Marine*†	2 0 0	—	
30000	Unl. Kingdom Telegraph*†	5 0 0	—	
20000	ditto 10 per cent. pref.*†	5 0 0	—	

b, blende; cl, coal; c, copper; g, gold; l, lead; s, silver; sl., slate; s-l, silver-lead; t, tin; z, zinc.

, Companies marked thus * have been incorporated with Limited Liability; those marked † have been admitted on the Stock Ex[change]; those marked thus ‡ have paid Dividends.

, Our object being to make the Share List correct, we earnestly call upon those who have the power to aid us, by forwarding any [addi]tions or correction which may, from time to time, come under their notice. To shareholders, as well as those officially connec[ted with] the mines, we appeal for information. Reports from mines—in fact, mining intelligence of every description, forwarded to o[ur office] will meet with ready attention.

London: Printed by Richard Middleton, and published by Henry English (the proprietors), at their office, 26, Fleet Stre[et], where all communications are requested to be addressed.—September 28, 1867.